THE ORCHID ALBUM.

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THE
ORCHID ALBUM,

MISSOURI
BOTANICAL
GARDEN

COMPRISING

COLOURED FIGURES AND DESCRIPTIONS

OF

NEW, RARE, AND BEAUTIFUL

ORCHIDACEOUS PLANTS.

CONDUCTED BY

ROBERT WARNER, F.L.S., F.R.H.S.,
AUTHOR OF SELECT ORCHIDACEOUS PLANTS,

AND

BENJAMIN SAMUEL WILLIAMS, F.L.S., F.R.H.S.,
AUTHOR OF THE ORCHID-GROWER'S MANUAL, ETC.

THE COLOURED FIGURES BY JOHN NUGENT FITCH, F.L.S.

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MDCCCLXXXVIII.

DEDICATED

BY SPECIAL PERMISSION

TO

H.R.H. The Princess of Wales,

BY

HER ROYAL HIGHNESS'

Very obedient and humble Servants,

ROBERT WARNER,

BENJAMIN S. WILLIAMS.

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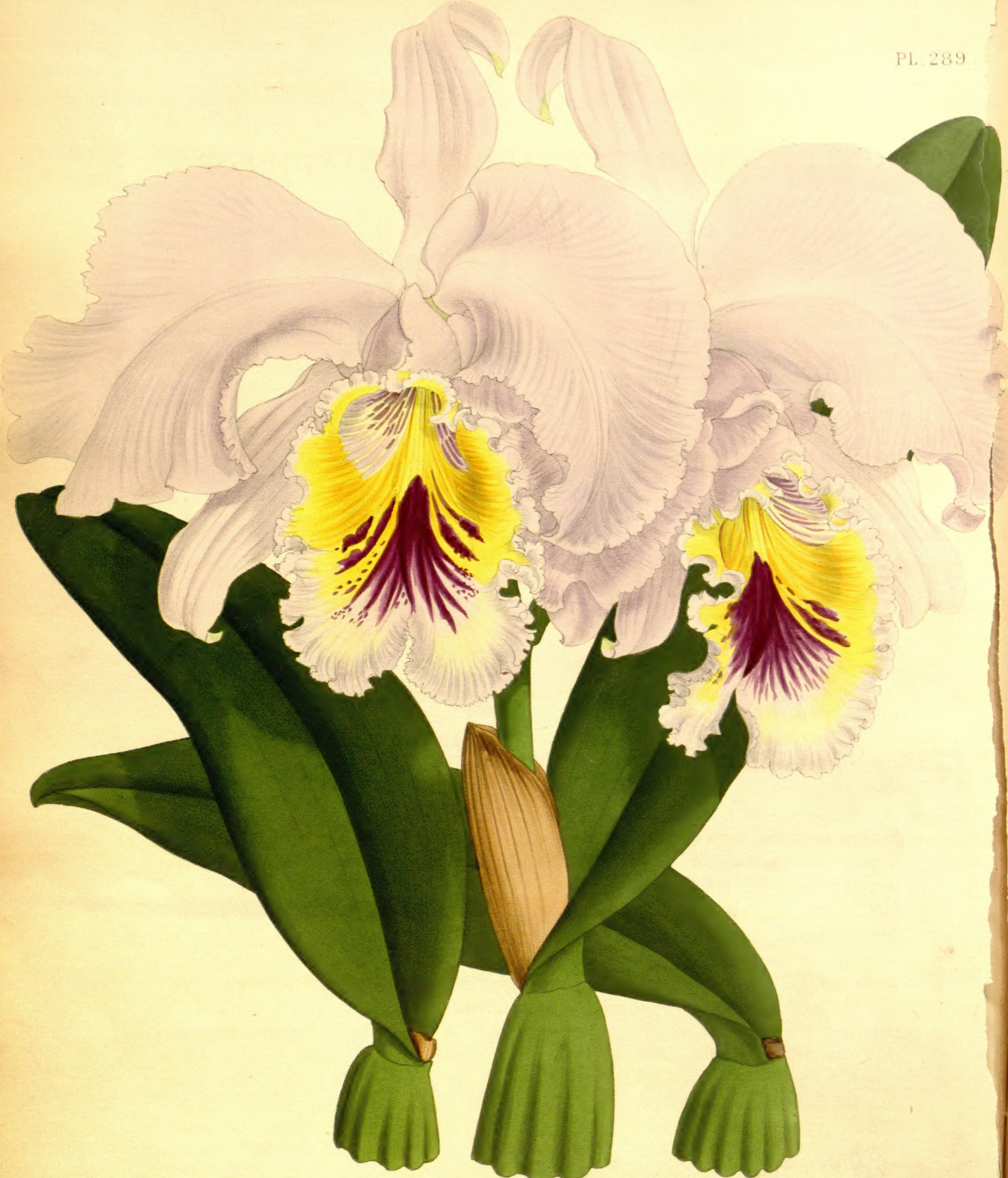

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CATTLEYA MOSSIÆ AUREA GRANDIFLORA.

CATTLEYA MOSSIÆ AUREA GRANDIFLORA.

[Plate 289.]

Native of La Guayra.

Epiphytal. *Pseudobulbs* oblong-fusiform, and furrowed, a foot or more high, clothed with numerous large sheathing scales, and bearing a single leaf upon the summit. *Leaves* oblong-obtuse, slightly keeled beneath, and upwards of six inches long. *Scape* terminal, three to four flowered, issuing from an oblong-acute compressed spathe. *Flowers* very large and highly coloured, some eight inches in diameter; *sepals* lanceolate, spreading, recurved at the apex, entire at the margins; *petals* elliptic-ovate, irregularly crispate at the margins, except near the base, and there plain, all soft blush in colour; *lip* broadly obovate, spreading in front, the basal part rolled over the column, the expanded portion is emarginate, crenulate and beautifully crisp all round the margin, ground colour deep rose, barred and streaked with lines of violet-rose, and heavily stained with rich orange towards the throat and upper margin, the front bordered with rose colour. *Column* clavate, semi-terete, included.

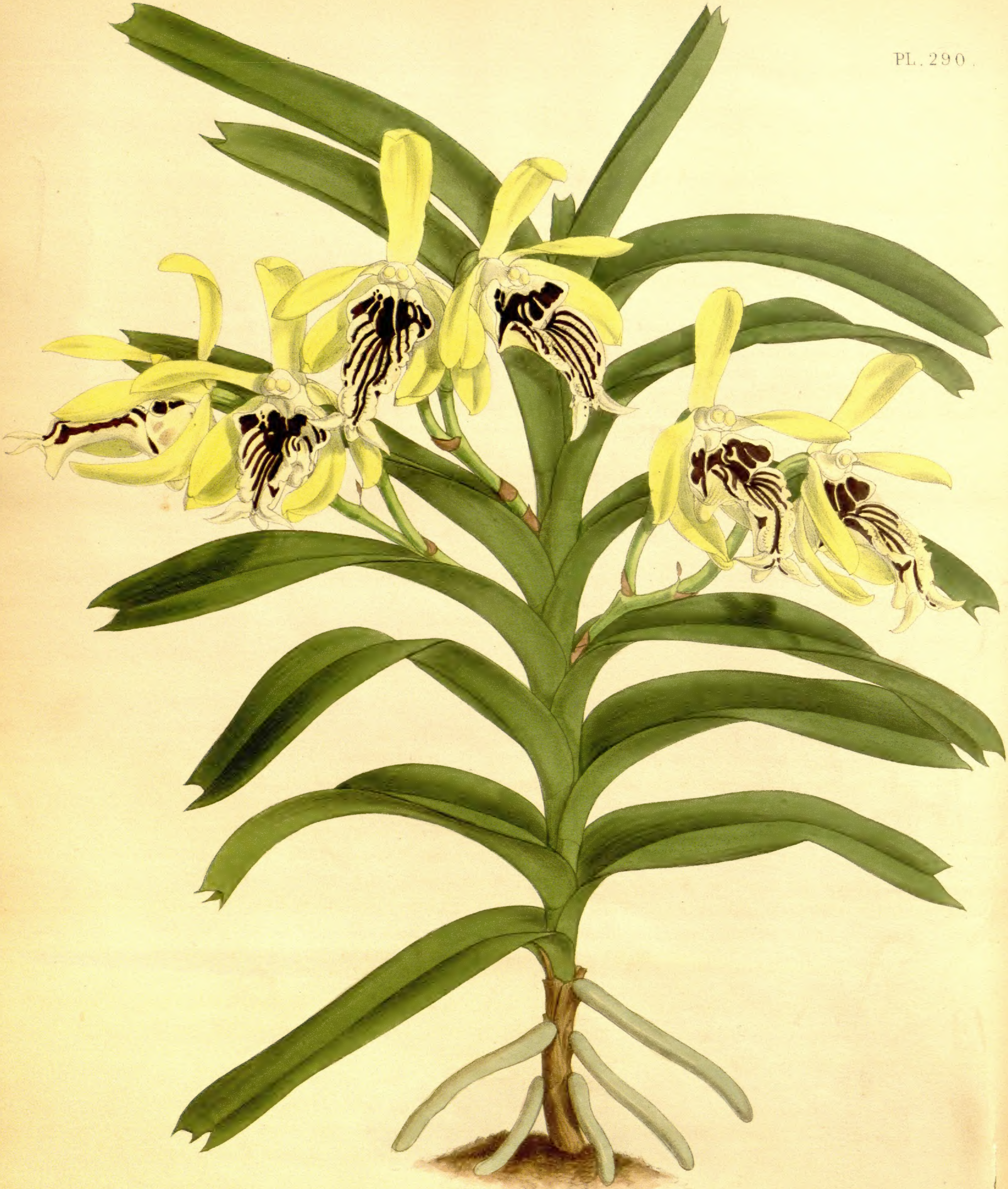
Cattleya Mossiæ aurea grandiflora, *Moore,* in *Gardeners' Chronicle,* June, 1864, p. 554; *Williams, Orchid-Grower's Manual,* 6 ed., p. 192.

We have already figured what we consider to be the typical form of this plant in our sixth volume, t. 246, and likewise the wonderful variety Hardyana, vol. iii., t. 125, which aptly illustrates the variableness of the species. It has been said of *C. Mossiæ Hardyana* that this is not a permanently fixed form, but having known and observed it for several years, we are enabled to confidently assert that this variety does keep true to its character, and we observed again this season a fine example of the same plant blooming with G. Hardy, Esq., of Timperley; and we hope to be enabled to figure, from time to time, some of the numerous grand varieties which were named and described by the late Mr. Thomas Moore, in the *Gardeners' Chronicle,* in 1864, from the magnificent collection of Robert Warner, Esq., Broomfield, Chelmsford, where not only those then selected for varietal names, but many other grand forms, helped to make up the most superb display of Cattleya Mossiæ we have ever seen together in one place. The particular form we here portray is a most beautiful and distinct one, as a glance at our illustration will fully prove.

Cattleya Mossiæ aurea grandiflora resembles the typical plant in habit of growth, but its flowers are larger, more highly coloured, and altogether superior; they are of good form and substance, and measure eight inches across, whilst frequently four of these magnificent blooms are borne upon one spike. The sepals and petals are blush; lip large, marked with a bar, and a few broken lines of volet-rose, very much stained with orange at the base, both in the throat and on the upper margin, lower part bordered with rose colour. It blooms during May and June, and its flowers continue in perfection for four or five weeks, if they are kept free from damp.

This variety requires the same treatment as the species. It should be potted in good fibrous peat, from which all the fine particles have been shaken, to which add some living sphagnum moss and some nodules of charcoal to keep it open and porous. The pots must be drained well, for drainage is one of the most essential points in the management of Orchids, and with Cattleyas in particular; for although they like abundance of water when growing, it must pass rapidly away, or they quickly decline in health.

CATTLEYA WARNERI.—We have received from E. G. Wrigley, Esq., of Duckenfield, a wonderfully fine flower of *Cattleya Warneri*. It is, without exception, one of the finest and largest we have seen. The flower measured nine inches across, the sepals were three inches in diameter, of a deep rose colour; lip orange. This blossom was of fine substance and form. Mr. Wrigley may be congratulated on flowering such a splendid variety of this Cattleya. With the above also came a very good example of a *Cattleya Mossiæ*.



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VANDA CRISTATA.

VANDA CRISTATA.

[PLATE 290.]

Native of Nepal and Bhotan.

Epiphytal. *Stem* slender, erect, producing numerous fleshy roots. *Leaves* two-ranked (distichous), imbricating at the base, broadly linear, channelled above, sharply carinate beneath, præmorse and tridentate at the ends, from five to six inches long, by one inch broad, coriaceous in texture, and deep green in colour. *Raceme* axillary, scarcely as long as the leaves, and bearing from four to six flowers, which measure about two inches in breadth; *sepals* and *petals* similar, incurved, and somewhat concave, the former slightly broadest, and all of a uniform yellowish green hue; *lip* three-lobed, broadly oblong, lateral lobes small, acute, middle lobe somewhat saccate; *spur* short and conical; the apex of the lip is ornamented with three stout cylindrical points, the upper surface is rich velvety yellow, streaked and variegated with deep purplish black. *Column* short, thick, and fleshy. Anther-case hemispherical.

VANDA CRISTATA, *Lindl.*, *Sertum Orchidaceum*, f. 3, in frontispiece; *Wallich's Catalogue*, N. 7328; *Lindley's Genera and Species of Orchidaceous Plants*, N. 9; *Botanical Register*, 1842, t. 48; *Botanical Magazine*, t. 4304; *Moore's Illustrations of Orchidaceous Plants—Vanda* 3; *Williams, Orchid-Grower's Manual*, 6 ed., p. 601.

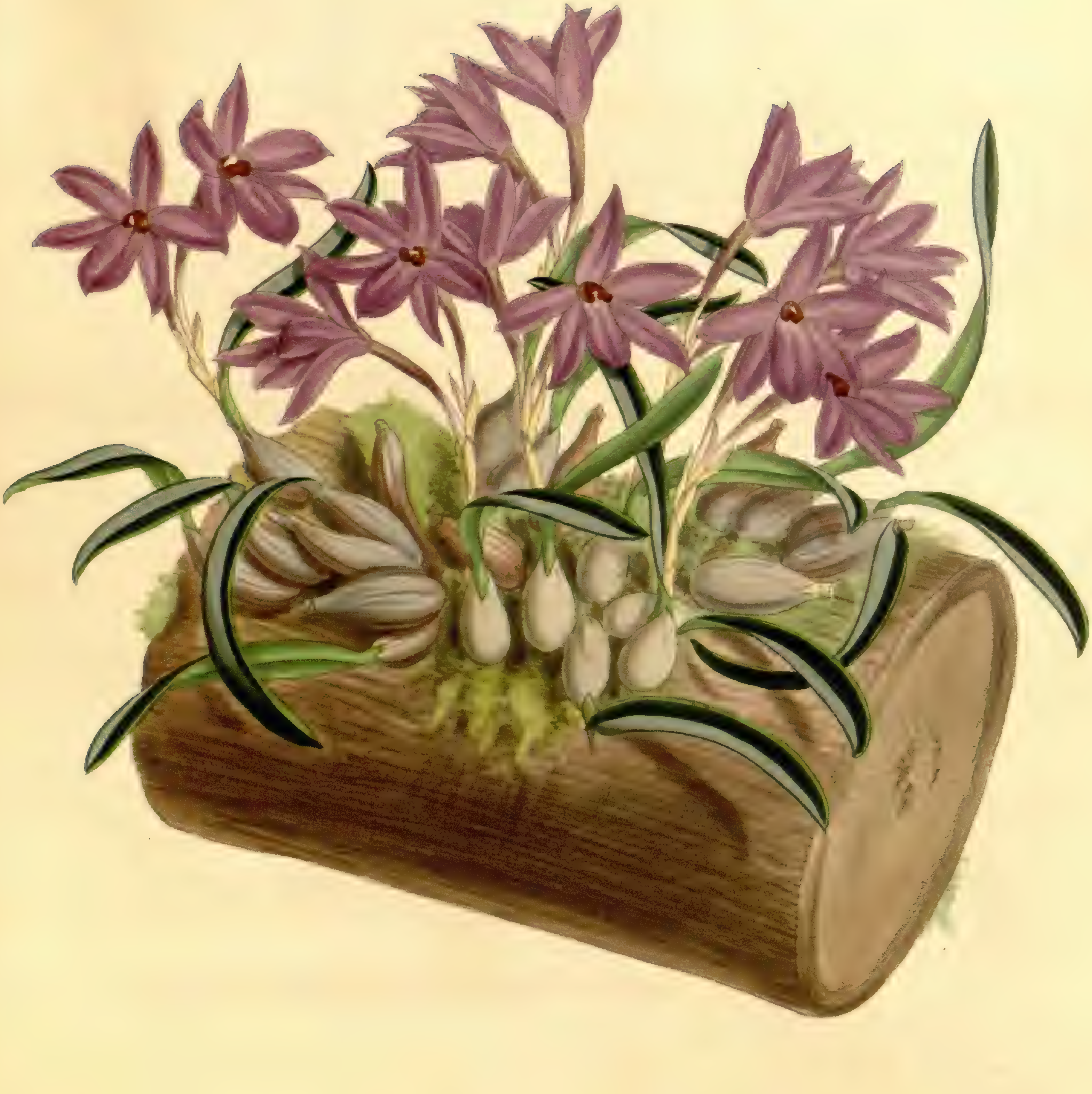
The beautiful Vanda we here introduce to our readers has been an inhabitant of our plant houses for nearly half a century; it, nevertheless, still remains scarce, and is but seldom met with in cultivation. Dr. Wallich found it growing wild upon trees in Nepal, and was much enraptured with its beauty, describing it as "flos exquisitæ pulchritudinis"; whilst Griffith found it in similar positions in Bhotan, near Chuka, and describes it in his *Itinerary Notes*, p. 203, as an *Aërides* remarkable for smelling of cockroaches. Fine specimens of this species were exhibited at the Chiswick and Regent's Park Horticultural Shows some thirty-five years ago. Staged chiefly by the late Mrs. Lawrence, of Ealing Park, Middlesex, and the late Sigismund Rucker, Esq., of Wandsworth, Surrey. It is not a very robust grower, but it forms a very distinct and effective object in a collection, and is a very pretty plant for a front row at a public exhibition. It must be admitted that Cattleyas and Lælias are grand and effective plants, but still these lovely small-growing species must not be overlooked or despised.

The specimen from which our drawing was taken flowered in the Victoria and Paradise Nurseries, in the month of April; the plant was about fifteen inches high, it bore four racemes of bloom, and from the base of the stem two young growths were pushing up freely. There are different varieties of this Vanda, some of which produce flowers very poor in comparison with the original form, which we here illustrate.

Vanda cristata is a dwarf-growing evergreen plant, and may therefore be grown by those who have small houses only in which to accommodate their pets. The stem is erect, bearing short sheathing leaves, which are from five to six inches long, and about an inch broad. The flower spikes issue from the base of the leaves, and are sometimes produced twice in one season, viz., in the spring and again in the autumn, the blooms lasting several weeks in full perfection; the former, however, is the most usual time of its flowering, and the spring also appears to be its blooming season in its native country. The sepals and petals are yellowish green, whilst the lip is velvety tawny yellow, the basal part striped longitudinally with deep blood-purple. The plant now under consideration requires somewhat different treatment to the large-growing species of the genus from the Indian Islands, such as *V. suavis* and *V. tricolor*. It should be grown with full exposure to the light, either on the side stages or in baskets suspended from the roof of the East India house, but it must be shaded from the sun during the hottest part of the day. If grown in a basket, a little living sphagnum moss should be placed about it to retain moisture, but its roots do not like confinement; they spread out freely into the atmosphere in search of moisture, which they readily absorb. The treatment recommended for Saccolabiums and Aërides in the *Orchid-Grower's Manual*, 6 ed., p. 96, will be found to suit this particular plant admirably.

Vanda cristata is a slow-growing plant, and it is also a very difficult subject to increase by division, hence it remains scarce, and is not to be seen frequently in cultivation. When lateral shoots are made, these should be encouraged to grow, but must not be removed from the parent until they have made a root for themselves, and when the plant is in vigorous health. When first cut off, they should be more heavily shaded than the established plants, and more care is necessary in administering water, until they become sufficiently strong to be treated in the same manner as the older examples.

Pl. 291



SOPHRONITIS VIOLACEA

SOPHRONITIS VIOLACEA.

[Plate 291.]

Native of the Organ Mountains, Brazil.

A small dwarf epiphyte with slender clustered ovate pseudobulbs, which bear a solitary linear-acuminate leaf, which is leathery in texture, and dark green in colour. *Scape* somewhat shorter than the leaf, furnished at the base with numerous small, dry, scaly bracts, and bearing from one to two flowers; *sepals* and *petals* spreading, nearly equal, free, lanceolate-acuminate in outline, and clear violet in colour. *Lip* obovate, acute, connate with the base of the column, rich deep violet. *Column* large, obtuse, fleshy, furnished with a small wing on each side near the summit; pollen masses eight.

Sophronitis violacea, *Lindley, Paxton's Flower Garden*, vol. iii., p. 69, fig. 223; *Lindley in Botanical Register*, p. 3, 1840; *Botanical Magazine*, t. 6880; *Williams' Orchid-Grower's Manual*, 6 ed., p. 578.

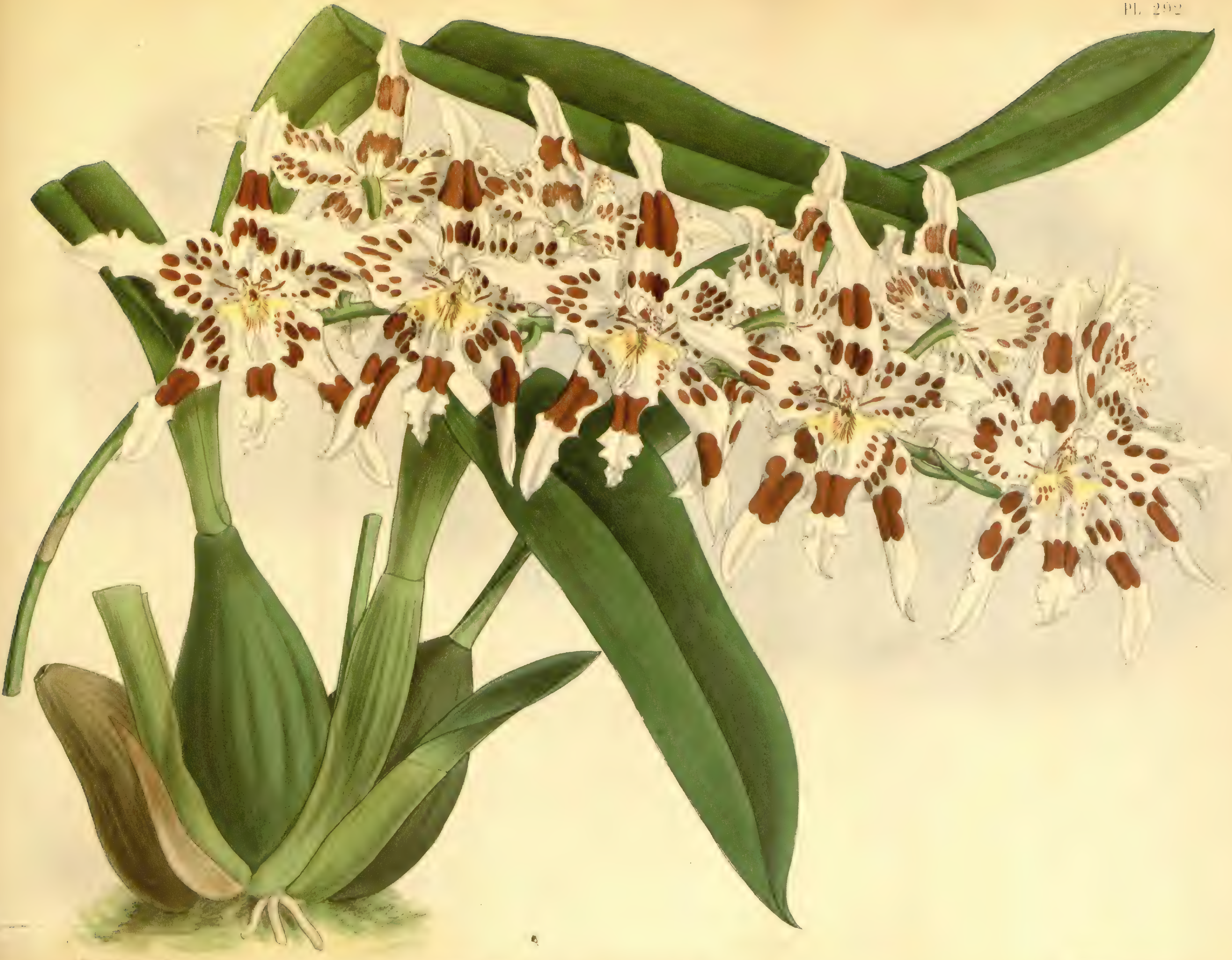
This species belongs to a genus of small-growing plants, all of which are natives of Brazil, where they are said to be found nestling in moss, on the branches of old and decaying trees, at considerable elevations. *S. cernua*, the first known kind, was introduced from Botofoga. It was originally proposed to call the genus *Sophronia*, but Dr. Lindley afterwards changed it to Sophronitis—a name it has ever since retained. The next species introduced was *S. grandiflora*, discovered by Gardner on trees in the Organ Mountains, near Rio Janeiro, in situations where rime frosts were seen in the mornings. A coloured plate of this beautiful orange-scarlet flowered species, formed the frontispiece of the first edition of the *Orchid-Growers' Manual*, which was published in 1852. The form there represented was considered, at that time, a very fine one; but since then much superior varieties have been sent home. Excellent portraits of two magnificent forms of *S. grandiflora* will be found in *Warner's Select Orchidaceous Plants*, 3rd Series, t. 3. *S. violacea*, the plant now under consideration, was introduced in 1840, and flowered for the first time with Mr. Bellenden Kerr, of Cheshunt, who sent it to Dr. Lindley to name.

The specimen from which our plate was taken came from the Nursery of M. Truffaut, Versailles, France; it was kindly sent for our artist to figure, and we can testify to its being a true and faithful sketch. It represents a variety with larger flowers than that upon which the species was founded, although the colour is precisely the same.

Sophronitis violacea is a pretty and entirely distinct species, and is said to occur very abundantly on trees in the Organ Mountains; but although great quantities of it have from time to time reached this country, it is a plant very seldom seen in flower. It is an evergreen, with small pseudobulbs bearing a single narrow leaf, which is about two inches in length ; the peduncles are two-flowered, and arise from between a small sheath, situated on the summit of the pseudobulb, and the flowers are of a clear rich violet colour. It blooms during the winter and spring months, and continues in full beauty for several weeks.

We find this species thrives well in a small basket, or shallow pan suspended from the roof, as near the light as possible, but it requires to be shaded from the sun during the hottest part of the day in summer; in spring and autumn, however, no shading will be necessary. It may also be grown on a block of fern-stem, or on a raft; but, treated in this manner, the plants dry up much quicker, and require more attention in the matter of watering. They enjoy sprinkling from the syringe during warm weather, and if sometimes dipped in the water until the blocks are well saturated with moisture, it will be found highly beneficial.

As previously remarked, this species requires to be kept fairly moist at the roots during the growing season, which commences soon after the flowers have faded. When growth is completed the supply of water should be considerably reduced, but the plant should not at any time be allowed to dry off, neither should it be disturbed when once it becomes established. For soil use fine fibrous peat, with a few small nodules of charcoal intermixed, and always keep fresh sweet material about the roots, but very little of any kind will be found necessary. Although this is generally considered a cool-house plant, we find it thrive best in an intermediate temperature, that is to say, in a house somewhat warmer than the Odontoglossum house.



ODONTOGLOSSUM ANDERSONIANUM SPLENDENS.

ODONTOGLOSSUM ANDERSONIANUM SPLENDENS.

[Plate 292.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* clustered, pyriform, costate, about three inches high, bearing a pair of leaves on the summit, and usually two sheathing ones at the base. *Leaves* ligulate, acute, carinate beneath, some twelve inches long, and pale green. *Scape* radical, raceme about two feet long, nodding. The *flowers* arranged in a distichous manner; *sepals* and *petals* about equal, ovate-oblong, acute, and slightly crisp at the margins (narrower than in *O. crispum*), white, tinged with rose, spotted and blotched with bright chestnut-brown; *lip* pandurate, cuneate at the base, apiculate in front, toothed on the edge, white, lower portion chestnut-brown, yellow at the base, where it is streaked with crimson lines, and spotted on each side with dark brown; *disc* yellow, crest prominent, dividing into a pair of horn-like processes. *Column* brown in front, wings and anther-case white.

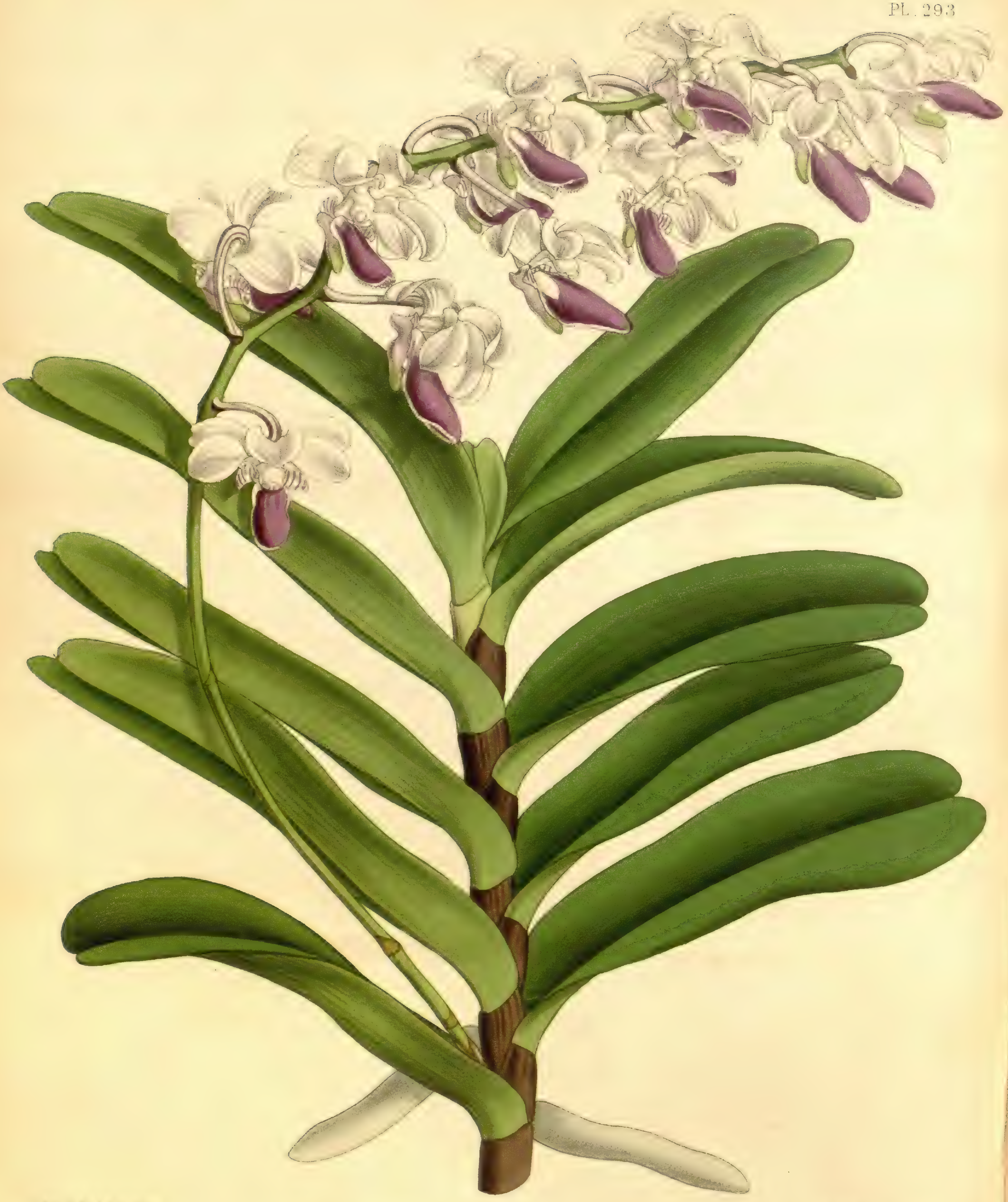
Odontoglossum Andersonianum, *Reichenbach fil.*, in *Gardeners' Chronicle*, 1868, p. 599; *Id.*, 1872, p. 41; *Orchid Album*, i., t. 35; *Floral Magazine*, 2 ser., t. 45; *Williams, Orchid-Grower's Manual*, 6 ed., p 423.

Odontoglossum Andersonianum splendens, *Williams, supra.*

The form of Odontoglossum, named by Professor Reichenbach after Mr. Anderson, who then had charge of the splendid collection of Orchids at Meadow Bank, near Glasgow, was first introduced to this country by the Messrs. Low & Co., of Clapton; subsequently it was sent home by various collectors. It is a supposed hybrid between *O. Alexandræ (crispum)* and *O. præstans*, or *O. gloriosum*; but the variety whose portrait we here lay before our readers is infinitely superior to the type both in the size and the brilliancy of its spotted flowers.

Our drawing was taken from a plant in the fine collection of R. H. Measures, Esq., The Woodlands, Streatham, where numerous fine species and varieties of Odontoglossums have bloomed for the first time. *O. Andersonianum splendens* is a very free-flowering variety; it produces long graceful racemes, and the blossoms are set very regularly in a two-ranked manner on the spike. The sepals and petals are white, tinged with rose and blotched with chestnut-brown, throat yellow, lined with crimson and spotted with dark brown on each side. It blooms during May and June, and continues in beauty for upwards of six weeks. The typical form is a natural hybrid between *O. Alexandræ* (*crispum*) and *O. gloriosum*, no doubt brought about by insect agency, and in all probability both parents of this variety were fine forms of their kind. The best of these hybrid Odontoglossums have hitherto been chiefly found on the mountains of New Grenada, at an elevation of from 7,500 to 8,800 feet, in the Bogota district; but as very few of the European collectors now gather their own plants, it is seldom all are seen in flower by them before they are despatched to this country, so that amateurs and nurserymen frequently have splendid new forms flower amongst imported plants, many of which have realised upwards of a hundred guineas. The plant here figured was imported promiscuously some years ago amongst a large batch of *O. Alexandræ* (*crispum*), which were not only very fine varieties themselves, but amongst them were several novel and handsome hybrid kinds.

This Odontoglossum thrives under the same treatment that *O. Alexandræ* (*crispum*) requires it should be kept as cool as possible during the hot days of summer, as the mean temperature of the hottest season in its native habitat is said to be seldom much over 60°, and during the coldest months about 57°, so that the variation of temperature is very slight, whilst the moisture is so great that it may be said never to have a dry season. Notwithstanding this, however, under cultivation, care must be exercised in order to prevent stagnant moisture remaining about the roots, which, instead of nourishing, is sure to rot them; therefore, avoid overburdening them with potting material, and provide ample drainage.



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AERIDES CRISPUM WARNERII

AËRIDES CRISPUM WARNERII.

[PLATE 293.]

Native of the East Indies.

An erect-growing epiphyte, with a somewhat slender, purplish black stem, from which at intervals are produced stout fleshy roots. *Leaves* ascending, about five inches long, narrowly-oblong, channelled above, carinate beneath, obtusely bilobed at the apex, and bearing a small mucro between the lobes, leathery in texture, deep green on the upper side, slightly paler beneath. *Raceme* axillary, erect, many-flowered and upwards of a foot in length; *sepals* and *petals* incurved, the latter recurved on the margin, nearly equal, the latter slightly narrowest, ovate obtuse, white, suffused with rose; *lip* large, lateral lobes small, erect, and spreading, white, transversely streaked with rosy red, middle-lobe ovate, entire, rich, rosy purple, narrowly bordered with white, and denticulate on the edge; *spur* short, stout, projecting forward, green at the point.

AËRIDES CRISPUM WARNERII. *Williams', Orchid-Grower's Manual,* 6 ed., p. 100.

The first appearance in this country of *Aërides crispum Warnerii* was a specimen exhibited by us at the last show held by the Horticultural Society at Chiswick, June 3rd and 4th, 1857, before the Society's South Kensington Gardens were in existence; but we cannot find that it has been either figured or described in any publication. The specimen referred to above had been grown by myself in the collection of the late C. B. Warner, Esq., at Hoddesdon, in whose honour the plant was named. At the time it was exhibited Dr. Lindley designated it as a very distinct and brilliantly coloured new Aërides, remarking that it was quite distinct, both in foliage and flower, from *A. crispum,* with a plant of which species *A. crispum Warnerii* was staged. Since that time plants of it have occasionally been imported, and we believe they have come from the neighbourhood of Bombay. Our drawing was taken from a specimen which flowered in the Victoria and Paradise Nurseries, and well illustrates the habit and features of this charming plant.

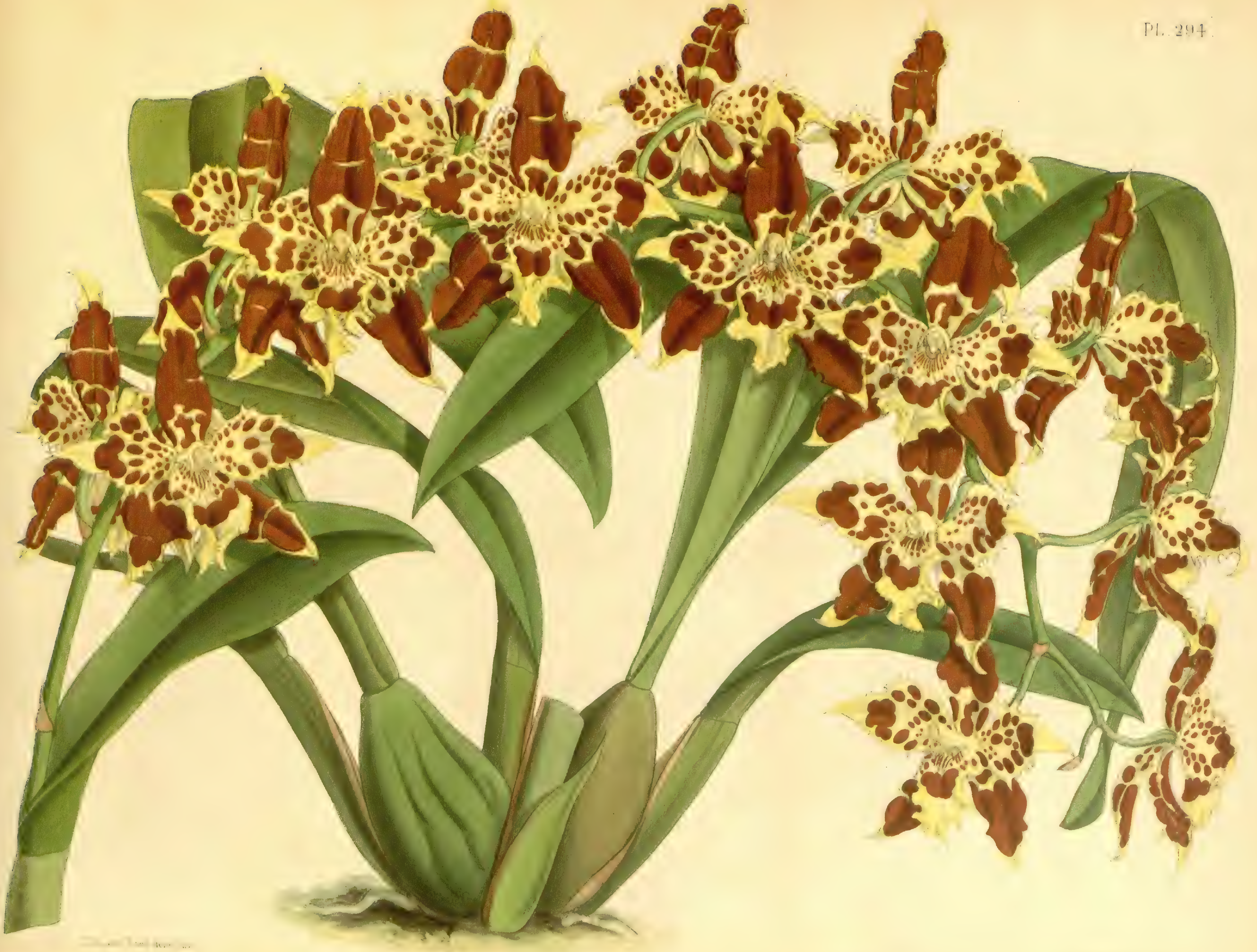
Aërides crispum Warnerii is an evergreen, erect in growth, bearing dark green leaves which are ascending—not horizontal as in *A. crispum*—from five to six inches in length, and about two inches in breadth, the stem and bases of the leaves being purplish black. It is a prolific bloomer, and the large flowers are deliciously fragrant; indeed, it possesses every good quality to be desired in a plant. The sepals and petals are white, flushed with rose, the lip deep rosy purple. The flowers are produced in May and June, and it continues in beauty three or four weeks.

This variety requires the same treatment as *A. crispum*, which we find thrives best in an intermediate or Cattleya house, thus indicating that very strong heat is not essential to their well-being, and we feel confident that many other Aërides would thrive in a much lower temperature than is usually accorded them. The great heat which it is thought Aërides require, has hitherto deterred many Orchid lovers from their culture; but our experience goes to prove that a temperature of from 55° to 60° by night, in winter, is high enough for the majority of the species. During the day a few degrees higher will be beneficial, especially if caused by sun heat. Aërides grow during the autumn months, and even during winter they are seldom quite dormant, and, as soon as growth ceases, the flower-spikes begin to push up from the axils of the leaves. They enjoy copious supplies of water during the summer season, and in winter just sufficient is necessary to keep the leaves fresh and plump, for if their leaves shrivel, the chances are the bottom ones will ultimately fall off, leaving bare and unsightly stems.

We find these plants enjoy an abundance of light and air, but as their foliage is tender, and is readily burned, they must be shaded from the sun during the hottest part of the day, or the leaves will be permanently disfigured. They thrive equally well in baskets or pots. The drainage must always be kept free and open, and just sufficient sphagnum should be used to hold the plant firm in its position, as the roots like to spread themselves in the air, and thus they absorb the moisture with which the atmosphere is charged.

GRAMMATOPHYLLUM ELLISII.—We have been much gratified by the receipt of a wonderful inflorescence of this grand Orchid, which came from G. Neville Wyatt, Esq., Lake House, Cheltenham. The raceme is two feet in length, bearing forty of its large, curiously-shaped, and singularly-coloured glossy flowers. The spike was cut, we are informed, from a fine strong specimen plant, which has been grown by Mr. Simcoe, gardener to Mr. Wyatt. In this variety the sepals and petals are greenish yellow, the interior being almost entirely covered with small brown spots, which become denser and confluent towards the tips. Petals pale yellow, tipped with reddish purple, the lip being white and purple. We have already figured this species on Plate 147 of our fourth volume.—B. S. W.

PL. 294.



ODONTOGLOSSUM LUTEO-PURPUREUM SCEPTRUM.

ODONTOGLOSSUM LUTEO-PURPUREUM SCEPTRUM.

[PLATE 294.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* ovate-acuminate, compressed, becoming slightly wrinkled with age, deep green. *Leaves* lanceolate-acuminate, narrow, and channelled at the base. *Raceme* robust, horizontal, many-flowered, bracts ovate-acute and membraneous, individual flowers nearly three inches across, somewhat smaller than those of the typical plant, but the segments are broader, and the whole flower is of a more regular outline; *sepals* oblong-lanceolate, acuminate, undulate on the edges, chestnut-brown, bordered with golden yellow, and bearing a few streaks and spots of the same colour scattered irregularly over the surface; *petals* much broader than the sepals, and, like them, apiculate, the edges fimbriated and toothed about the middle, golden yellow, spotted with chestnut-brown near the base, and blotched with the same colour in the upper part; *lip* somewhat ovate-cordate, retrorse and apiculate at the apex, much fringed and denticulate on the edge, rich yellow, bearing a large somewhat reniform blotch of chestnut-brown in front of the calli, which consists of a number of teeth-like processes, projecting forward, the two front ones being much the longer, and diverging. *Column* yellow, helmet-shaped, with a tooth-like projection on each side near the apex.

ODONTOGLOSSUM LUTEO-PURPUREUM SCEPTRUM, *Reichenbach fil.*; *Illustration Horticole*, 3 series, t. 73; *Id*, *Xenia Orchidacea*, ii., p. 194; *Gardeners' Chronicle*, N. S., xvii., p. 525; *Williams, Orchid-Grower's Manual*, 6 ed., p. 448.

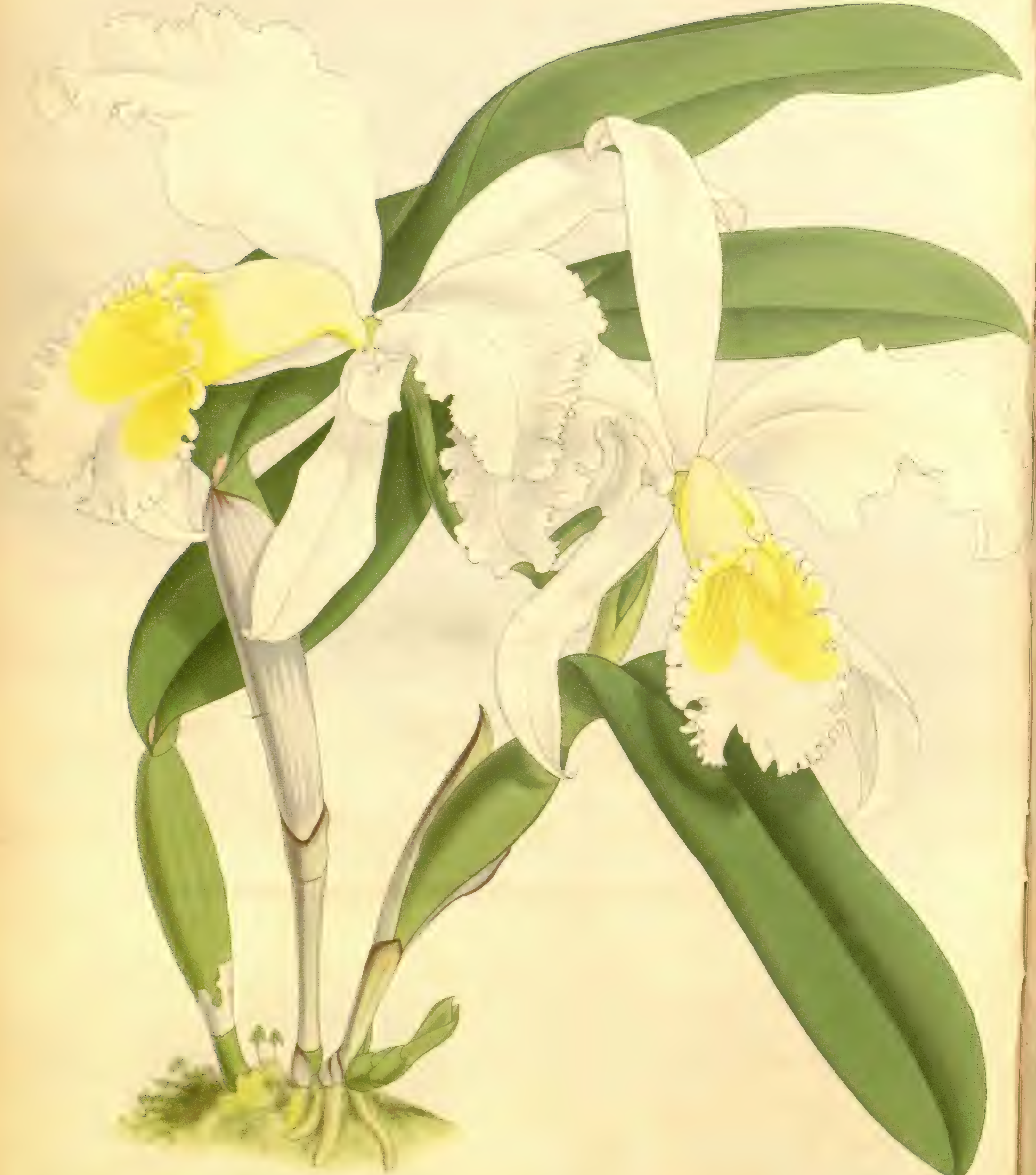
The researches by plant collectors amongst the mountain regions of South America and Mexico have largely increased our knowledge of Orchids. More especially is this the case with the genus Odontoglossum. Numbers of species, varieties, and hybrids are continually coming to hand; and so popular has this family become with plant-growers, that however numerous the new forms, they appear welcome to all. Odontoglossums are extremely useful plants, their fine spikes of bloom being of very long duration. The *O. luteo-purpureum* section is totally distinct in colour from those of *O. Alexandræ (crispum)* and other white forms, which renders it very desirable for contrast, an object which should be studied by all desirous of producing a pretty picture by judiciously arranging their plants. This variety, as may be seen by our plate, is well worthy of a place in every collection. Of course, there are many shades of colour in this, as in almost every other Orchid, some being much brighter and superior to others, which is brought about by the hybridisation continually going on amongst these plants in a state of nature.

Odontoglossum luteo-purpureum sceptrum was first discovered by Wallis, and was sent by him to M. Linden in 1868. It was found growing upon the branches of trees, forming dense clumps, on the Central Cordillera of New Grenada. It is a compact-growing evergreen variety, with light green leaves, freely producing its spikes of bloom after the bulbs are matured. The sepals are somewhat oval-oblong, acuminate, toothed and undulated at the edges, deep chestnut-brown, margined with yellow. The petals are broader than the sepals, irregularly lobed at the edges, yellow, blotched as in the sepals; lip yellow, having a curved blotch of chestnut-brown in front of the disc. It blooms during May and June, and requires the same treatment as *O. Alexandræ (crispum)* and other New Grenadian kinds.

These plants remain in flower for a very long time—so long, indeed, that sometimes the plants become exhausted and the bulbs shrivel. This is very injurious, and before it occurs the spikes should be removed and placed in water, where they can be enjoyed without injury to the plant.

ORCHIDS AT THE CHATEAU DE GOUVILLE, FRANCE (the residence of M. Le Comte Adrien de Germiny).—We recently had the pleasure of visiting this establishment, where there exists a very grand collection of plants, and amongst them are many wonderful specimen Orchids; but one of the most notable features at the time of our visit was the magnificent display of *Disa grandiflora*, which was, without exception, the finest that has ever come under our notice. There were about two hundred spikes, bearing about four hundred of its brilliantly-coloured blossoms, all expanded, beside a vast quantity of unopened buds, which bid fair to maintain a like display for some time to come. The plants, when in bloom, are taken into the Orchid house, and intermixed with other flowering Orchids, such as Odontoglossums, *Oncidium macranthum*, and many other beautiful kinds, the bright flowers of the Disa, which are vivid scarlet and crimson veined with pink, producing a grand effect. Mr. Vincent, the gardener, says that these Disas have all been grown by him from small plants; they are kept in the greenhouse both during the growing and resting seasons, and only removed to the Orchid houses for purposes of decoration when they are in flower. The house in which they are grown is a low one, and the plants occupy a stage near the glass, in which position they enjoy ample light and a free circulation of air. The specimens are in eight and ten-inch pots, full of growths and flower-spikes; and, judging from the quantity of strong vigorous shoots which are pushing up all over the surface, they are likely to be fully double as large in another year. The soil used for these plants is peat, leaf-mould, and loam, and they are liberally supplied with water during the growing and flowering season. We heartily congratulate Mr. Vincent upon the success he has achieved in the cultivation of this most beautiful terrestrial Orchid; and having found the secret of its cultivation, we hope he will turn his knowledge and energy towards solving the mysteries which surround many other beautiful species belonging to the same section.—B. S. W.

PL. 267



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CATTLEYA WAGENERI.

B.S.Williams P[illegible]

CATTLEYA WAGENERI.

[Plate 295.]

Native of La Guayra.

Epiphytal. *Pseudobulbs* oblong fusiform, becoming furrowed with age, enclosed in large membraneous sheaths, and bearing a single leaf on the summit, which is oblong obtuse, keeled beneath, thick and fleshy in texture, and rich deep green in colour. *Flowers* spreading, between six and seven inches across; *sepals* ligulate acute, entire, pure white; *petals* also pure white, much broader than the sepals, elliptic ovate, margins prettily undulated towards the upper half; *lip* convolute at the base, where it is rolled over the column, the front portion obovate and emarginate, beautifully crispate round the margin, pure white, saving a rich stain of orange-yellow in the throat, which is traversed with some radiating lines of a paler yellow. *Column* included, clavate and semi-terete.

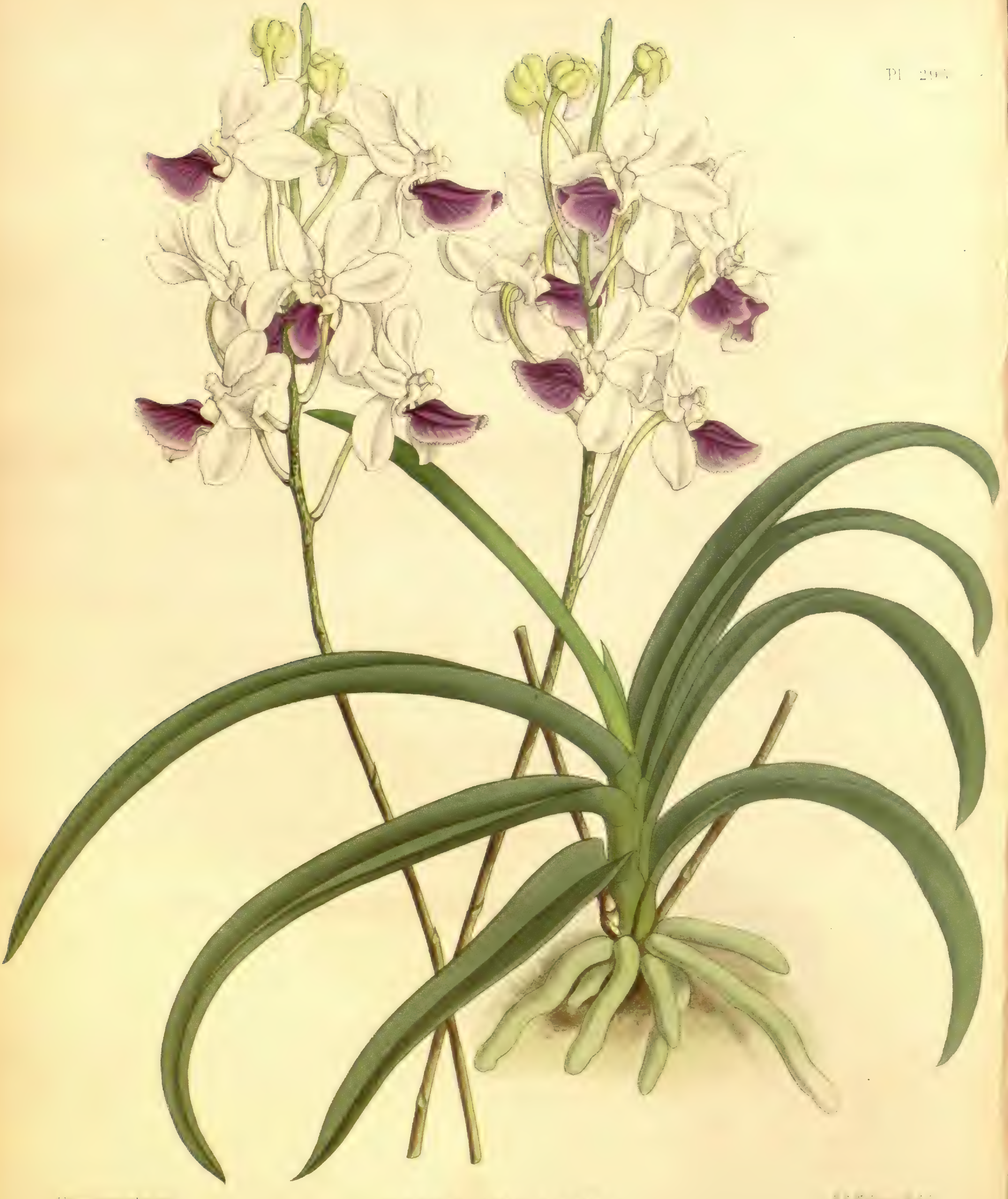
Cattleya Wageneri, *Reichenbach fil.*, *Bonplandia*, ii., t. 1, No. 152; *Id.*, *Xenia Orchidaceæ*, i., t. 13; *Williams*, *Orchid-Grower's Manual*, 6 ed., p. 207.

The grand Cattleya which we now have the pleasure to introduce to our readers was first discovered by Herr Wagener in 1851 in Caracas, at an altitude of 4,000 feet; it is one of the most distinct and chaste kinds yet introduced. We believe that it first flowered in this country with the Messrs. Backhouse, of York, and afterwards with the Messrs. Jackson, of Kingston, who exhibited a fine-grown plant of it at the Royal Botanic Society's Show in Regent's Park, June 20th, 1857. At that time it was very rare, and it remained so for many years; whilst even now it is still scarce, although it now and again occurs amongst large imported batches of *Cattleya Mossiæ*. But only a few have made their appearance in this country, by which we infer it is by no means abundant in its native wilds; therefore the specimens that have been imported have always realised high prices. Our drawing was taken from a plant which flowered at the Victoria and Paradise Nurseries in the early summer of the present year. We noted that the yellow on the upper part of the lip is rather deeper than is usually to be found on this plant, which produces a fine contrast to the pure white of the sepals and petals.

Cattleya Wageneri is a wonderfully fine and free-growing plant; also a profuse bloomer, producing three flowers upon a spike. The leaves are oblong and blunt-pointed, sharply keeled beneath, thick and coriaceous in texture, and lively shining green in colour. The individual flowers are some seven inches across; sepals and petals pure white; lip also white, stained in the upper part and throat with rich yellow, and prettily lobed and frilled round the edge. Its season of flowering is May and June, and the blooms continue in perfection for three and four weeks if they are kept free from damp. This is best secured by removing the plant when in flower to a dry house, where although no artificial warmth is necessary in the daytime, heat should be applied during the night, which will dry up the superabundant moisture, and prevent the flowers from becoming spotted. As a proof of the efficacy of the above treatment, the plant from which our plate was prepared retained all its pristine beauty for upwards of a month. Thus it will be seen that a little attention to the requirements of the blooms is amply rewarded; for nothing is more vexing than to find flowers—which are the result of a year's care and toil—spotted and spoilt in a few days.

This Cattleya requires the same cultural treatment as *C. Mossiæ* and all the *labiata* section—that is to say, they enjoy good exposure to the light, and but very little shade at any season. Although Cattleyas are plants of easy culture, there is much care and observation necessary in order to manage them well, and to maintain them in vigorous health for any length of time. To secure this, our practice has always been to pot them in a mixture of good fibrous peat from which the mould has been shaken, with a little living sphagnum added. Perfect drainage is most essential, as everything must be kept sweet and congenial about them. Watering is the rock upon which the majority of cultivators are wrecked. We have seen Cattleyas flourishing under a system of watering in a profuse manner; but this happy state is only a temporary illusion, for by-and-bye the roots begin to rot, and the plants fall into ill-health, from which in most instances they never recover. We have found that Cattleyas require but a very moderate supply of water, which should be given just at the time when it is beneficial to them, and at such times only.

Insects attack Cattleyas to some extent, and on account of their large foliage will soon disfigure them, rendering the rich deep green of their leaves rusty brown or papery white; therefore a sharp scrutiny must be kept upon the plants, and the marauders destroyed upon their first appearance. White scale is a pest Cattleyas are very subject to, and as it is imported with them sometimes in quantity, they would appear to be a victim to attacks of this in their native wilds. This scale, however, may be exterminated by constant examinations, and removing them by sponging wherever found. To thrips usually must be attributed the greatest disfigurement of these plants; but they can be destroyed by steaming with tobacco-juice, through the medium of the new apparatus called "The Thanatophore," which we have now used for some time with great success, our experience being corroborated by many other growers of these plants.



J. Nugent Fitch del. et lith.

VANDA AMESIANA.

B. S. Williams Publ.

VANDA AMESIANA.

[PLATE 296.]

Native of the East Indies.

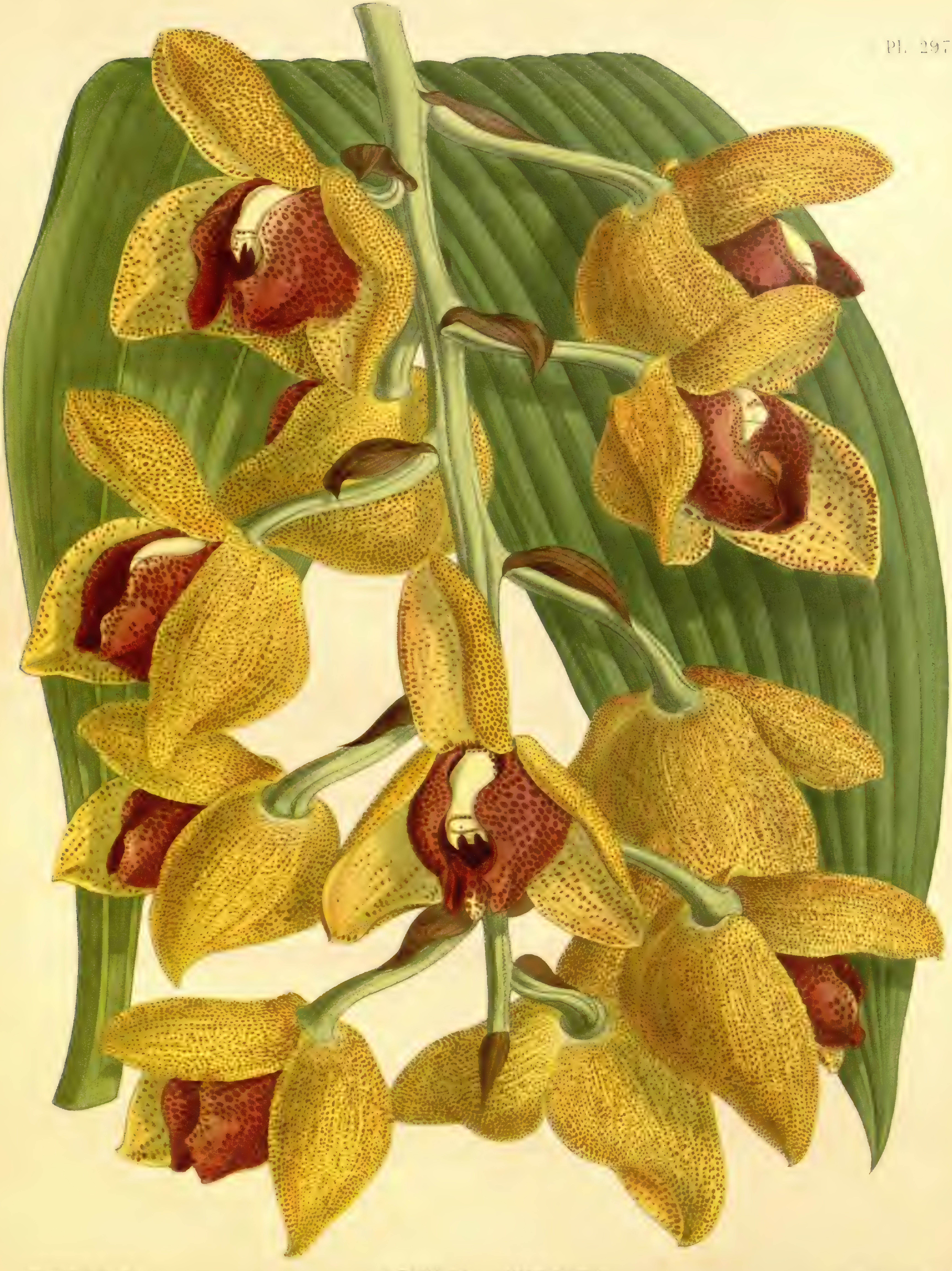
Epiphytal. *Stem* terete, producing numerous thick fleshy roots at the base. *Leaves* distichous, ligulate acuminate, channelled above, rounded beneath, thick and fleshy in texture, and deep heavy green in colour. *Scape* erect, a foot or more high, dotted with brown, and furnished with a few distinct, appressed, acuminate bracts. *Raceme* ten to twelve flowered. *Flowers* somewhat resembling *Phalænopsis Lowii* in general outline, deliciously fragrant, about an inch and a half across, footstalks white, nearly two inches long; *sepals* and *petals* spreading, nearly equal, cuneate oblong, obtuse acute, creamy white, faintly tinged with flesh colour, passing into yellow with age; *lip* three-lobed, side lobes small, erect and nearly square, same colour as the petals, middle lobe reniform, slightly lobed in front, rich rosy magenta, bearing three thickened lines, and a small rounded callosity on the disc, denticulate round the edge; *spur* short, conical and compressed.

VANDA AMESIANA, *Reichenbach fil.*, in *Gardeners' Chronicle*, Third Series, ii., p. 764, 1887.

This charming new and distinct-growing Vanda was introduced from India, some few years since, by Messrs. Hugh Low & Co., of Clapton; it came amongst a quantity of other Orchids, and although it was at once recognised by them as something different, it was not till the spring of the present year that its great beauty and novelty became apparent, adding another species to the long record of new Orchids which have been introduced to the Clapton Nurseries. As soon as it bloomed the Messrs. Low were kind enough to allow our artist to make a drawing of it, and thus we are enabled to lay before our readers the portrait of this unique and beautiful plant.

The love for Vandas, we are glad to find, is largely on the increase, and deservedly so, as there are few plants more ornamental, even when not adorned with their lovely and fragrant blooms, than are the various forms of *Vanda tricolor* and *V. suavis* amongst the larger-growing kinds, whilst many of the smaller kinds, although less majestic in appearance, have few equals for the beauty of their flowers. There are, we believe, many more species yet to be found in the various islands scattered throughout the Indian Seas, which we hope soon to see adorning the rich collections of orchidaceous plants which now exist in this and other countries.

Vanda Amesiana is a dwarf-growing evergreen and free-flowering species; the leaves are arranged in a two-ranked manner, strap-shaped, grooved on the upper side, and rounded beneath, gradually tapering to a fine point; they are thick and fleshy in texture, and deep green in colour on both surfaces. The spike is erect, bearing numerous delicately coloured and very fragrant flowers. Sepals and petals about the same size, flat and spreading, white, suffused with a delicate blush; lip deep rose, margined with pale rose. It produces its flowers during the months of May and June, and, like those of most other Vandas, they continue in full beauty for several weeks. This elegant new species is named in honour of The Honourable F. L. Ames, North Easton, Mass., U.S.A., who is a zealous cultivator, and possesses one of the finest collections of orchidaceous plants in the United States. This plant will thrive in a pot or basket, but we find baskets preferable for the dwarf-growing kinds of Vandas; in these they can be conveniently suspended near the glass, thus giving them the full benefit of the light, but shading from the sun will be necessary in summer during the hottest part of the day. In autumn and winter the warmth of the sun will be beneficial, and shading unnecessary. This course of treatment induces vigorous and robust growth and tends to produce a greater quantity of spikes, whilst the flowers will be richer in colour, and the foliage firm and healthy. Vandas frequently suffer from being too heavily shaded during the summer months; to avoid this the shading material used should be thin in texture, and the blinds should not be allowed down in cloudy weather. The summers in this country are short, and our light dim, in comparison to that of the native home of the Vandas, therefore, under cultivation these plants require all the light we can possibly give them. In potting or basketing the small growing Vandas a very small quantity of sphagnum moss will suffice; but good drainage is indispensable in order that not a vestige of anything stagnant remains about them. In summer the moss should be kept fairly moist, but in winter very little water will be necessary; nevertheless, even at this season, the moss should never become dry, for although the dormant time or resting season is the winter, they are apt to lose their bottom leaves if subjected to severe drought. The East India house is the most suitable place in which to grow this and other dwarf species, but the temperature should not be excessive at any time.



J. Nugent Fitch del. et lith.

ACINETA HUMBOLTII.

B.S. Williams Publ.

ACINETA HUMBOLDTII.

[PLATE 297.]

Native of U.S. of Columbia and Venezuela.

Epiphytal. *Pseudobulbs* stout, oblong-ovate, somewhat angular, about three inches high, and deep green. *Leaves* usually three or four, broadly lanceolate, strongly ribbed, a foot or more long, and about three inches broad, leathery in texture, and rich deep green. *Raceme* pendulous, about two feet long, many flowered, furnished with numerous large ovate-lanceolate, acuminate, membraneous bracts. *Flowers* sub-globose, thick and waxy in texture, rather fugacious; *sepals* oblong-obtuse, concave, spreading, deep tawny yellow on the inside, with a few spots and dots of chocolate scattered irregularly over the surface, on the outside they are suffused with purple, and densely spotted with deep chocolate; *petals* flat, rhomboid, partly enclosing the column, much smaller than the sepals, deep rosy red, profusely dotted with crimson; *lip* small, lower part oblong concave, lateral lobes cuneate, chocolate at base, dotted with crimson, front portion pointed and bilobed, yellowish white. *Column* short, with broad, rounded wings.

ACINETA HUMBOLDTII, *Lindl. Botanical Register,* 1843, *misc.* 100; *Flore des Serres,* x., t. 992-3; *Moores' Illustrations of Orchidaceous Plants, Acineta,* 1; *Williams, Orchid-Grower's Manual,* 6 ed., p. 92.

PERISTERIA HUMBOLDTII, *Lindl. Botanical Register,* 1843, t. 18.

ANGULOA SUPERBA, *Humboldt, Bonpland, and Kunth's Nova Plantarum Genera et Species,* i., t. 93.

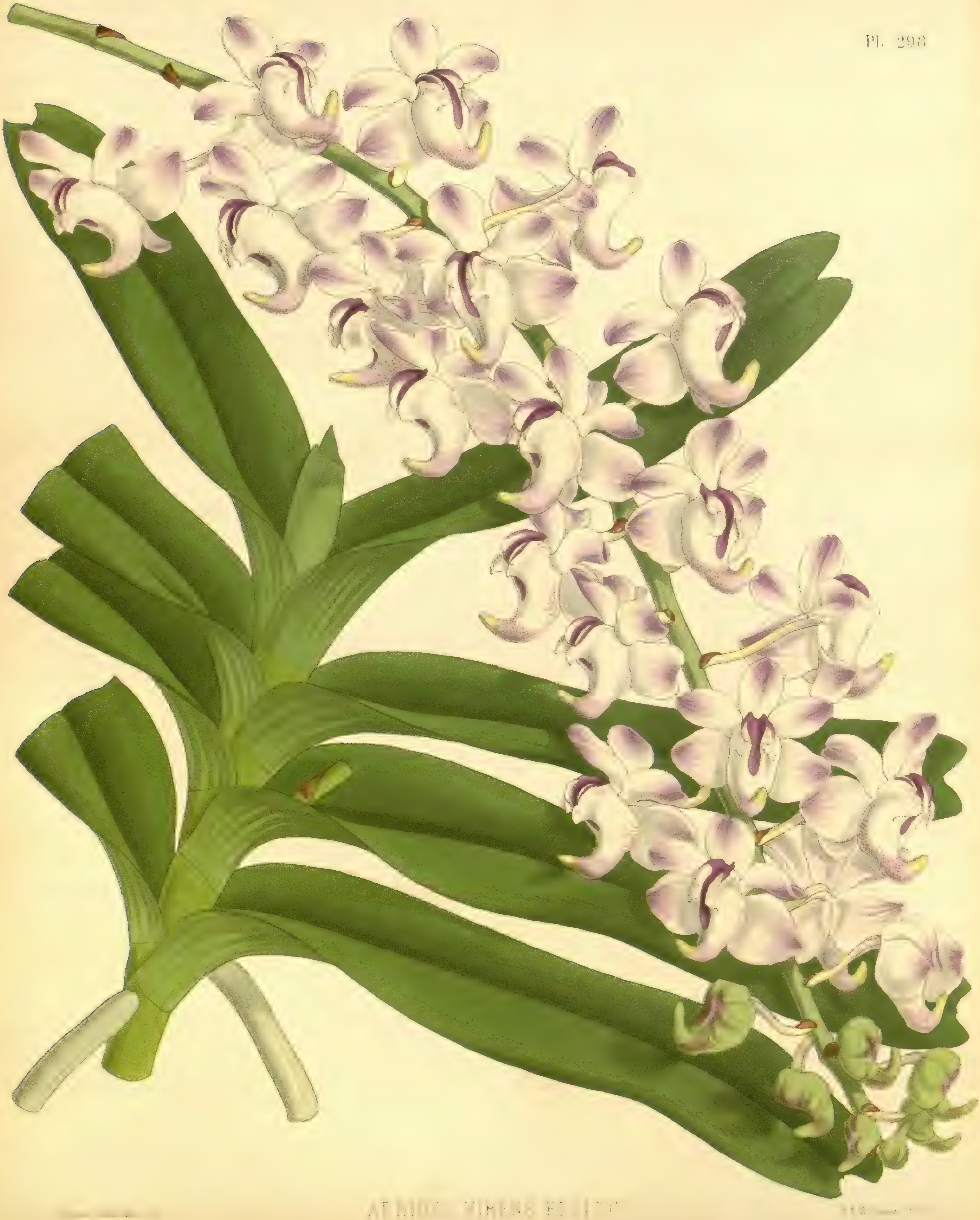
This handsome Orchid is a very old inhabitant of our stoves, being figured in the *Botanical Register* as far back as 1843. It is closely related to the genus Peristeria, and is a fitting subject for basket culture, producing a fine effect when suspended from the roof of the house in which it is grown. About eight species of this genus are known, and these are all natives of tropical America.

This plant is best grown in a basket, as the flower-spikes, which are produced from the base of the bulbs, take a downward direction, pushing themselves out through the sides and bottom of the basket, in the same way as Stanhopeas. It is of easy culture, and should be grown in a compost of good fibrous peat and sphagnum moss; the addition of a few lumps of charcoal will be found beneficial to it. It may be cultivated either in the Cattleya or East India House, but we have found it to do better in the latter place, as it delights in an abundant supply of heat and moisture during the growing season. It should be shaded from the fierce rays of the sun during the hottest part of the day, but a little sunshine in the morning and afternoon will be found advantageous. It may be increased by separating the pseudo-bulbs when fully matured, and placing them in a warm, shady position until they show signs of breaking into growth.

Acineta Humboldtii is an evergreen plant, furnished with short, stout, furrowed, pear-shaped pseudo-bulbs, and broad nervose leaves about a foot or more in length, coriaceous in texture, and dark green in colour. The flowers are produced on many-flowered, drooping racemes about two feet long, they are sub-globose, fleshy; sepals deep tawny yellow on the inner surface, faintly spotted with pale chocolate-purple, outer surface same colour, suffused and densely spotted with deep chocolate-purple; petals much smaller than the sepals, deep rosy red covered with crimson spots. The plant flowers during the spring and early summer, and lasts only a short time in perfection.

VANDA TERES VAR. ANDERSONII.—A remarkably fine form of this Orchid has recently been flowering in the fine collection of W. C. Pickersgill, Esq., Blendon Hall, Bexley. The growths are from three to four feet in length, and the plant has four spikes bearing twenty-eight flowers, ranging from six to eight flowers each. The plant is in the most vigorous condition, and Mr. Moore, the head gardener, attributes the successful cultivation of this plant to its being grown in the full sun, with plenty of moisture. In the same collection was a magnificent lot of well-flowered plants of *Epidendrum vitellinum majus*, having by far the finest flowers we have seen on small plants. A large quantity of well-grown *Odontoglossum vexillarium* were also in flower, amongst which were some splendid varieties, with broad and beautifully marked lips. The collection is not large, but the plants are well grown, and does Mr. Moore the greatest amount of credit.

PL. 298



AERIDES VIRENS ELLIOTTI

AËRIDES VIRENS ELLISII.

[Plate 298.]

Native of Java.

An erect-growing epiphyte with a somewhat stout stem, from which are produced, at intervals, numerous thick and fleshy white ærial roots. *Leaves* arranged in a two-ranked manner (distichous), broadly ligulate, obliquely notched at the apex, somewhat channelled at the base, thick and leathery in texture, and of a peculiar light green colour, *Racemes* pendant and many-flowered, some eighteen or twenty inches long. *Flowers* deliciously fragrant; dorsal sepal obovate obtuse, the lateral sepals being very much the broadest, ground-colour delicate soft French white, suffused with rose, and tipped with bright amethyst; *petals* oblong-cuneate, smaller than the lateral sepals, but resembling them in colour; *lip* cucullate, inflated, incurved, prolonged into a stout incurved acuminate horn, which is creamy white flushed with rose, and tipped with greenish brown, lateral lobes obtuse, denticulate on the upper edge, freckled with lines and dots of amethyst towards the base; front lobe bearing in the middle an inflated, serrated tongue of a rich deep amethyst.

Aërides virens, *Lindl.*, *Botanical Register*, 1843, *misc.* 48; *Id.* 1844, t. 41; *Paxton's Magazine,* xiv., 197; *Orchid Album,* iv., t. 160; *Williams, Orchid-Grower's Manual,* 6 ed., p. 110.

Aërides virens Ellisii, *Williams, Orchid-Grower's Manual,* 6 ed., p. 111.

In general habit and appearance, the majority of Aërides resemble Vandas, although for the most part their flowers are very distinct; they are all Eastern plants, which, in a state of nature, are found clinging to the stems and branches of trees, or upon rocks, and the greater portion of them produce showy and fragrant flowers.

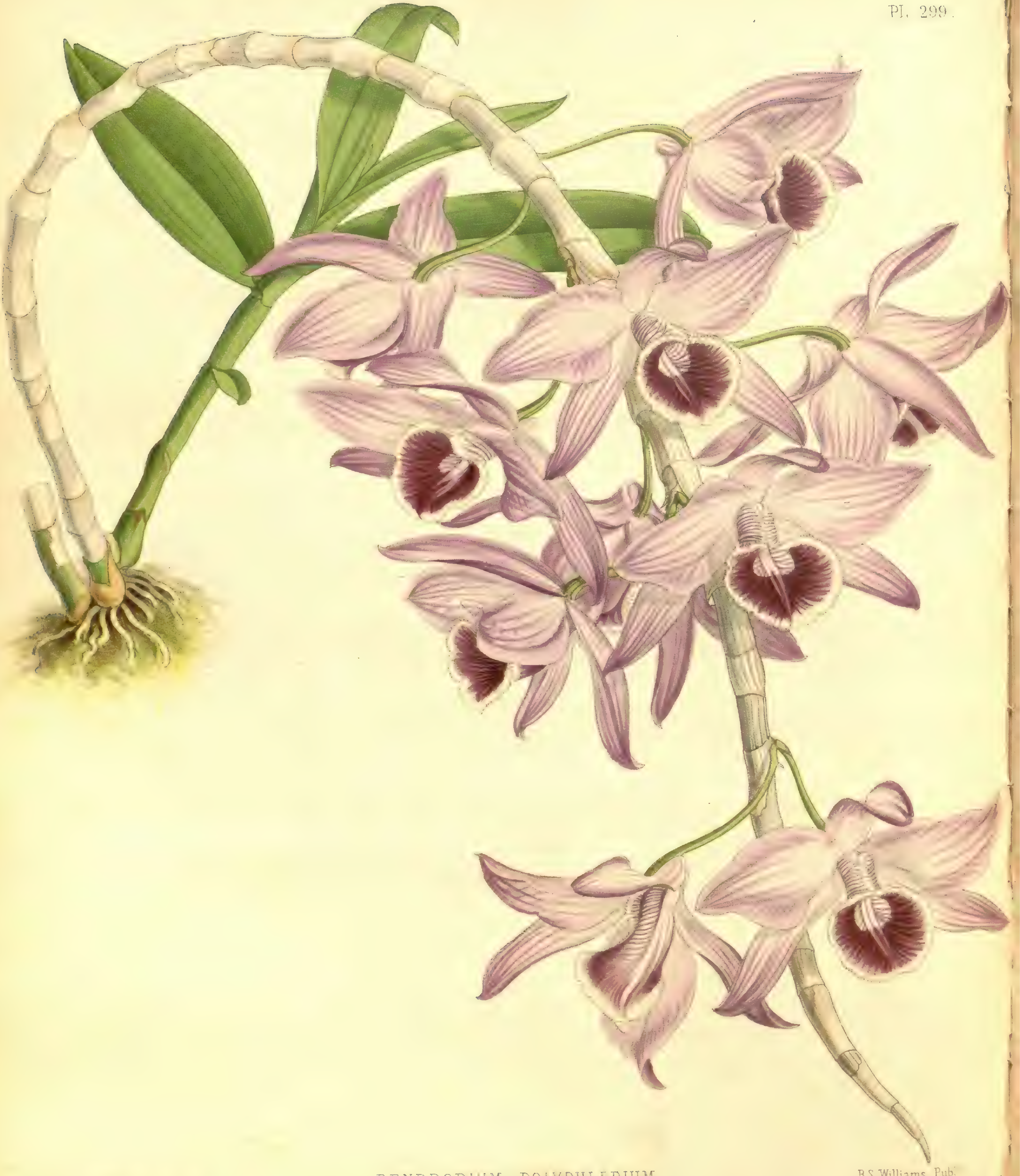
Although Aërides at the present time are not so extensively cultivated as they used to be in the early days of Orchid growing, they are, nevertheless, among the handsomest Orchids which have yet been introduced to our notice. Their beauty as ornamental foliage plants, even when out of flower, is well known to those who have had the good fortune to possess a collection of these plants. We hope that the introduction during the last few years of such fine novelties as *A. Lawrenciæ, A. Houlletianum,* and other kinds, may cause a taste to again spring up for them. We are indebted to the kindness of Captain Shaw, of Whitehall, Buxton, Derbyshire, for the opportunity of figuring this beautiful plant, which has bloomed with him for several years.

Aërides virens Ellisii is a very great improvement on the typical plant; the habit of growth is altogether stronger and the spikes very much longer. The leaves are about six inches long by one and a half broad, of a bright green colour. The racemes are eighteen to twenty inches long, bearing from thirty to forty flowers. The sepals and petals are white, suffused with rose and tipped with bright amethyst; the lower sepals are very round and broad; lip large, white, side lobes beautifully spotted towards the base with amethyst; mid-lobe broad, rich amethyst, spur curved upwards and tipped with brownish green. It blossoms in June and July, and lasts for some time in full beauty. For the cultivation of this plant we must refer our readers to Plate 160 in our Fourth Volume, where *A. virens* is depicted, and the details of its management described.

This fine Aërides flowered first at the Victoria and Paradise Nurseries. It was exhibited at the Royal Horticultural Society's Show, when held at Birmingham, and was admitted by all who saw its long graceful spikes of flower, to be a fine variety. It was named by us in honour of the late Rev. W. Ellis, of Hoddesdon, who was a great lover of Orchids, and to whom we are also indebted for the introduction of many of our best Madagascar Orchids. The plant we figure is a part of the original specimen.

CAMBRIDGE LODGE, FLODDEN ROAD, CAMBERWELL, the residence of R. J. MEASURES, ESQ.—At this suburban villa there exists a well-grown collection of Orchids, and when such is the case it affords one pleasure in saying a few words on the merits of their cultivation. We can safely say that we have not seen a more cleanly and well-cared-for collection than this. The Vandas are very good and well grown, there being many fine specimens, such as *V. Lowii*, of which rare species there is a noble plant; of *V. suavis*, several good specimens; *V. tricolor*, Dalkeith variety; *V. tricolor Patersonii*, and many others, which are grown on the centre stage. On the side tables are well-grown plants of Aërides of different kinds, such as the rare *A. Schröderi*, one of the finest; also *A. Lawrenciæ*, *A. Houlletianum*, and many other distinct species of East Indian Orchids. In an adjoining house we were surprised to see such a wonderful specimen of *Cœlogyne cristata alba;* the plant has eighty-three leading growths, and was in fine health. In the Masdevallia house were some fine and well-grown plants of the best kinds: *M. Harryana versicolor*, one of the most beautiful, rare, and distinct; *M. Harryana*, *Bull's Blood; M. Harryana Denisoniana*, and many other rare species and varieties. In another house was a fine plant in flower of *Cattleya bicolor*, with six spikes; *C. bicolor Measuresiana*, of a fine colour, and with a distinct white margin on the lip. In the Phalænopsis house the plants were doing well; we noticed some fine plants of *P. amabilis*, *P. grandiflora*, *P. Sanderiana*, and a well-coloured *P. Esmeralda*, finely in bloom, the richest coloured form we have seen. Associated with this, were fine plants of *P. casta*, *P. Stuartiana*, etc. We also noticed two fine plants of *Dendrobium Brymerianum*, with growths two feet high, which, when in bloom, must be very fine.

[*For continuation see under Plate* 299.]



J. Nugent Fitch del. et lith.

DENDROBIUM POLYPHLEBIUM.

B.S. Williams Pub.

DENDROBIUM POLYPHLEBIUM.

[PLATE 299.]

Native of Burmah.

Epiphytal *Stems* tufted, from twelve to eighteen inches long, nearly uniform in size throughout their entire length, but tapering slightly towards the apex, bent downwards, furnished when young with numerous thin, membraneous sheaths, which fall off with age. *Leaves* deciduous, some three inches long, oblong acuminate, notched at the apex, somewhat leathery in texture, and deep green. *Flowers* produced singly, but more often in twos and threes, on a short raceme, and yielding a slight odour, resembling the drug popularly known as Turkey Rhubarb; *sepals* spreading, oblong-lanceolate and acute, soft rosy-mauve; *petals* somewhat ovate, with a broad claw very much wider than the sepals, rosy-purple; *lip* rounded, entire, shorter than the sepals, rolled over the column, where the colour is rosy-mauve, streaked with fine lines of crimson, the front portion ornamented with a profusion of short, stiff hairs, which give it a downy appearance, fringed round the edge, purplish-crimson, bordered with white, and bearing over its surface numerous radiating lines of purple. *Column* white, toothed at the apex.

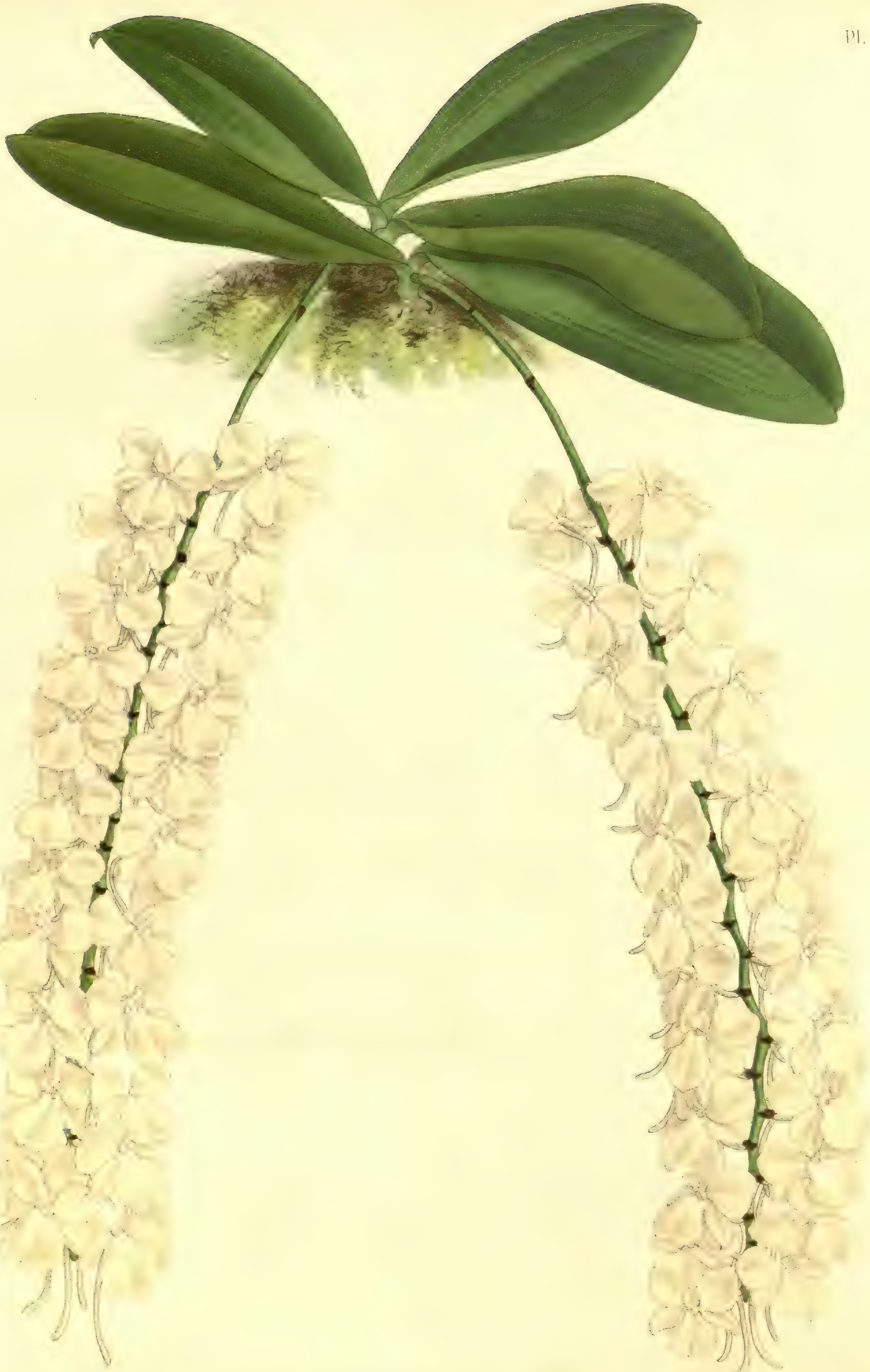
DENDROBIUM POLYPHLEBIUM, *Reichenbach fil.*, in *Gardeners' Chronicle*, N. hyb. (Nat. ?) *Third Series*, i., 1887, p. 702.

The subject before us appears to be a mule, and Professor Reichenbach is of opinion that the various examples hitherto found of this plant are natural hybrids; this is likely to be the case, as General Berkeley—the gentleman who first discovered this plant—informs us that he found it growing singly, and at long intervals. He first obtained a solitary plant in 1876, of which he sent flowers to Professor Reichenbach. Another plant was found by him in 1884, and again the following year, 1885. In 1886, a plant of the same kind appeared amongst some Dendrobiums imported by the Liverpool Horticultural Company. It has also recently flowered in the collection of E. G. Wrigley, Esq., at Howick House, Preston. This supposed mule is believed to be a cross between *D. Pierardii* and *D. rhodopterygium.* The plants first found in 1876, and again in 1884, above referred to, are darker in colour than other plants which were found in a different district; but this gentleman, who has the whole series which were found by him in his collection, and has flowered them all, considers their origin to be the same.

Dendrobium polyphlebium resembles in its habit of growth *D. Pierardii latifolium*, and produces pseudo-bulbs twelve to eighteen inches long. The flowers are produced very freely and last a long time in perfection; the sepals and petals are broader than those of *D. Pierardii*, and bright rosy purple in colour; lip much deeper in colour than the sepals and petals, fringed at the border and veined with purple. It should be grown either in a basket or on a block of wood, this being the most natural way in which to cultivate it, as in its native habitat it is found growing on the branches of trees. The compost required is a good fibrous peat, with a little moss added, when grown in a basket; if grown upon a block it will be sufficient to secure it by means of a piece of wire, no soil being needed. Of course, grown in this way, the plant requires a far greater amount of moisture during the growing season, than if grown in a basket. To grow this plant to perfection, as well as all the deciduous section of the genus, it must have decided periods of rest and growth. During the growing season it should have an abundant supply of heat and moisture, and as the pseudo-bulbs become mature, they should be gradually ripened off by diminishing the supply of water, and giving them the full benefit of air and sunshine. The East India House is the best place in which to keep it during the growing season, and when at rest it may be placed in a much cooler temperature. During this period very little water should be given; in fact, only just sufficient to keep the stems from shrivelling. After the flowering season is over, which is during the late spring and early summer months, it will begin to make its new growth; it should then be moved back into warmer quarters.

Cambridge Lodge, Flodden Road, Camberwell, the residence of R. J. Measures, Esq. [*Concluded from Plate* 298].—There is a separate house for Cymbidiums, in which there are many fine specimens of *C. Lowianum*, three feet across; and we should imagine that these plants, when in flower, must produce a grand effect. There are several varieties of *C. Lowianum*, as well as *C. Hookerianum*, a rare species, and *C. giganteum;* also two well-grown plants of the rare *C. Parishii*, a most beautiful species, a figure of which will be found in our first volume, plate 25. In the next house was a fine show of *Oncidium Jonesianum*, with twenty spikes of its showy white and spotted flowers. In the Cattleya house is a fine assortment of well-grown plants, *C. Bowringiana*, at the time of our visit, being in bloom. We noticed a fine specimen of *C. Trianæ alba*, which bore thirteen spikes last year and is growing well; *C. Mossiæ Reineckiana* is another rare plant in excellent health, besides many other fine and rare Cattleyas in this house. In the cool house were a great many Odontoglots, such as *O. vexillarium*, *O. Alexandræ*, and other species, all promising well for the next flowering season; the plants of *O. Roezlii* are also doing well. There is a most complete collection of Cypripediums—nearly all the new hybrids and species in cultivation, such as *C. œnanthum superbum*, *C. Morganiæ*, which are two of the finest and most distinct kinds; *C. Schröderæ*, *C. grande*, and the rare *C. tesselatum porphyreum*—a splendid hybrid. This collection bids fair to become ere long one of the very finest in the country. The plants are well looked after by the gardener, Mr. Simpkins, who receives every encouragement from Mr. Measures and his son, Ernest, who are both great enthusiasts in this noble family of plants. —B. S. W.

Pl. 300.



[illegible] ANGRÆCUM CITRATUM. R. S. Williams [illegible]

ANGRÆCUM CITRATUM.

[PLATE 300.]

Native of Madagascar.

Epiphytal. *Stem* short, from which is produced numerous slender flat roots. *Leaves* distichous, oblong-lanceolate acuminate, narrowing towards the base, some four inches long, bright green on the upper side, paler beneath. *Scape* axillary, pendulous, furnished with numerous appressed, blackish brown sheathing bracts. *Raceme* six to nine inches long, many-flowered, flowers flat and spreading, slightly less than an inch across, yellowish white, or pale citron-yellow in colour; *sepals* obovate-spathulate, obtuse, lateral ones slightly reflexed, dorsal one arching over the column; *petals* much larger than the sepals, orbicular, obovate, shortly clawed; *lip* flat, orbicular, emarginate, furnished with a broad claw; *spur* slender, flexuous, much longer than the lip.

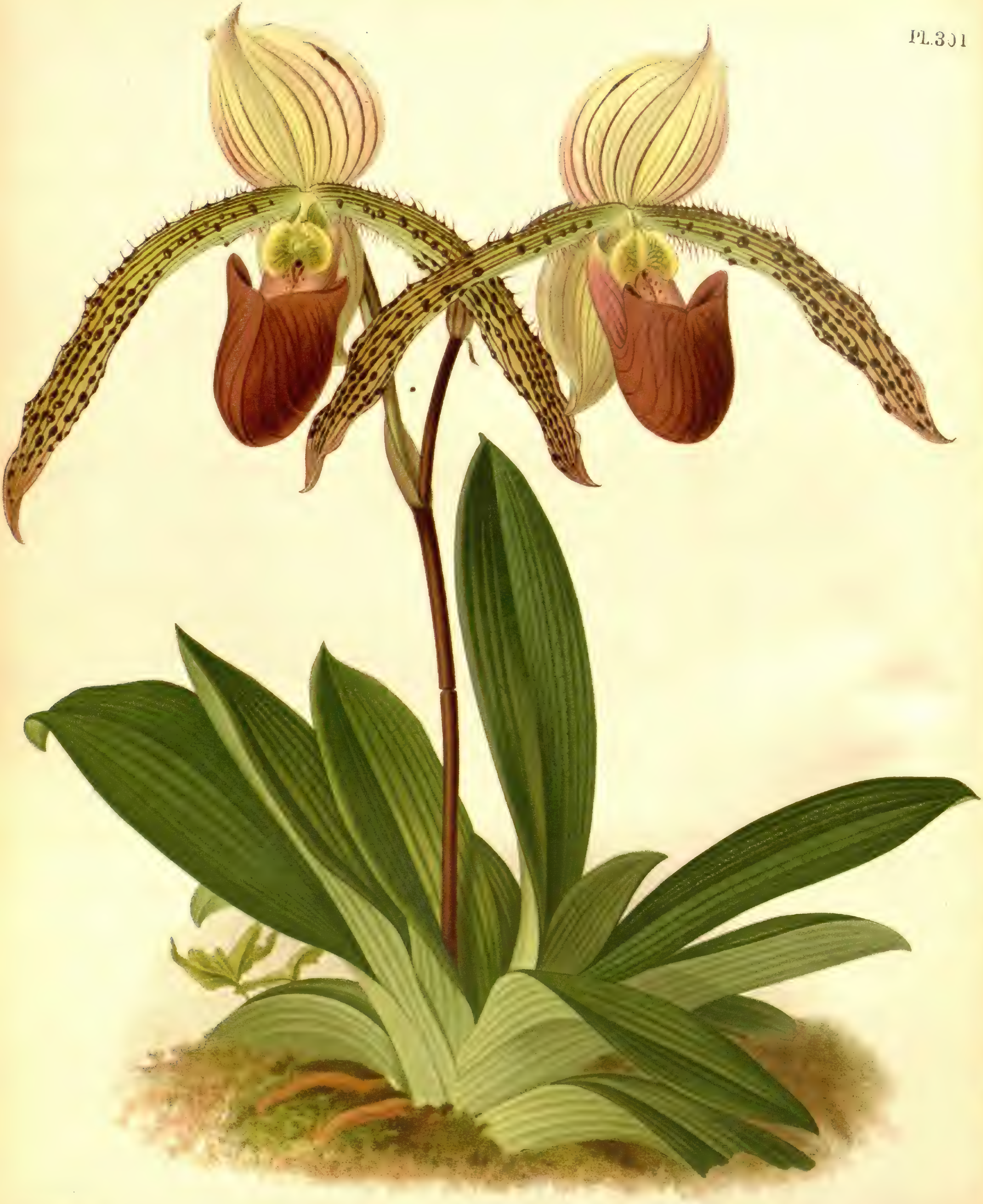
ANGRÆCUM CITRATUM, *Du Petit Thouars, Histoire particulière des Plantes Orchidées recueillies sur les trois îles Australes d'Afrique*, t. 61; *Hooker, Botanical Magazine*, t. 5624; *L'Illustration Horticole*, t. 662; *Williams, Orchid-Grower's Manual*, 6 ed., p. 115.

Until within the last few years this plant was extremely rare in Orchid collections; it has, however, now become very plentiful, thanks to the energy of our Orchid collectors, and it may now be found in almost every collection. It is a small compact-growing species, as a glance at our illustration will show; and it produces its graceful spikes of flowers in great profusion. The leaves are oblong-lanceolate, bright green, and the long pendulous racemes of flowers are produced from the axils of the leaves. The flowers, which are closely and evenly set upon the raceme, yield an agreeable perfume, and are yellowish white, producing a charming effect when hanging from the baskets. We were very much struck with this charming plant a few years ago in the collection of W. Lee, Esq., Downside, Leatherhead, where it was grown in great profusion, and was in bloom at the time of our visit. There were many fine plants suspended round the house, their fine racemes of bloom hanging very gracefully with their pretty white flowers; they were considerably above the Phalænopsis, of which there was a grand lot of spikes, and the foliage was magnificent. Some of the species were in bloom, such as *P. Schilleriana* with its mauve-coloured flowers, *P. amabilis* and *P. grandiflora* with their showy white blossoms, also *P. Stuartiana* with its white and spotted flowers, and many others. It was the finest display of these showy flowers that has come under our notice. The middle stage was also full of fine specimens, bearing numerous strong and large spikes; the side tables, over which the

Angræcums were hanging their dark green foliage and their long racemes of bloom, associated with the Phalænopsis, produced the grandest show imaginable. We mention this to show the effect that this plant will produce when grown so strongly as these were. It should be grown at the warmest end of the East India house in sphagnum moss; a liberal supply of moisture should be given during the summer and autumn months, but during the winter they require great care in watering—sufficient being given to keep them in a plump condition. We have grown this plant successfully in small earthenware pans with holes perforated in the sides, to which the wires for suspending are attached. The great point in favour of these pans is that they do not decay, as is the case with the wooden baskets. This plant should be placed near the glass and kept well shaded. The plant here portrayed flowered with Mr. J. E. Bonny, at the Hextable Nursery, Swanley. Mr. Bonny is a very successful cultivator of Angræcums and Phalænopsids, as well as many other Orchids.

MAYFIELD, FALKIRK, has been known for many years for its fine collection of Orchids, which was formed by the late Provost Russell, whose name has frequently occurred in our pages in connection with Orchids, and after whom many have been named and figured, such as *Saccolabium Blumei Russelliana*, *Lælia Russelliana*, *Cattleya Trianæ Russelliana*, *&c.*, *&c.* We paid a visit to this establishment in September last, and were greatly surprised to see the fine new houses which have been erected for the cultivation of Orchids by Robert Wilson, Esq., who has bought this beautiful place, and has commenced the formation of a collection of Orchids; and who, we may say, has already some fine plants, and a good stock coming on. Especially notable in the collection is a noble specimen of *Aërides quinquevulnerum*, measuring fully three feet in height from the top of the pot with two fine growths at its base; the plant is perfect, with dark green foliage. This year it produced nine spikes of its glorious flowers, of great length, which must have been grand when in bloom. This same specimen bore eight spikes in 1886. We consider it the most perfect plant that has come under our notice. This specimen has been cultivated by Mr. Sawley, who is now gardener to Mr. Wilson, and was also with the late Provost Russell. We are glad to find that this noted place has passed into such good hands. There is also another collection being formed by James Wilson, Esq., Bantaskin, Falkirk, close by Mayfield, where already a fair collection has been brought together within the last year, and promises well for a general collection; there are also many fine specimens at this place. Mr. Mitchell, the gardener, is also managing his plants well. There is a fine range of glass, and Mr. Wilson intends putting up more. This is a fine domain, with a splendid lodge and iron entrance gates, with a broad carriage road through the park, with trees on either side leading to the mansion Many alterations and great improvements have been effected at this place within the last few years.—B. S. W.

PL.301



J. Nugent Fitch del

B.S. Williams, Publ^r

CYPRIPEDIUM EURYANDRUM

CYPRIPEDIUM EURYANDRUM.

[PLATE 301.]

Garden Hybrid.

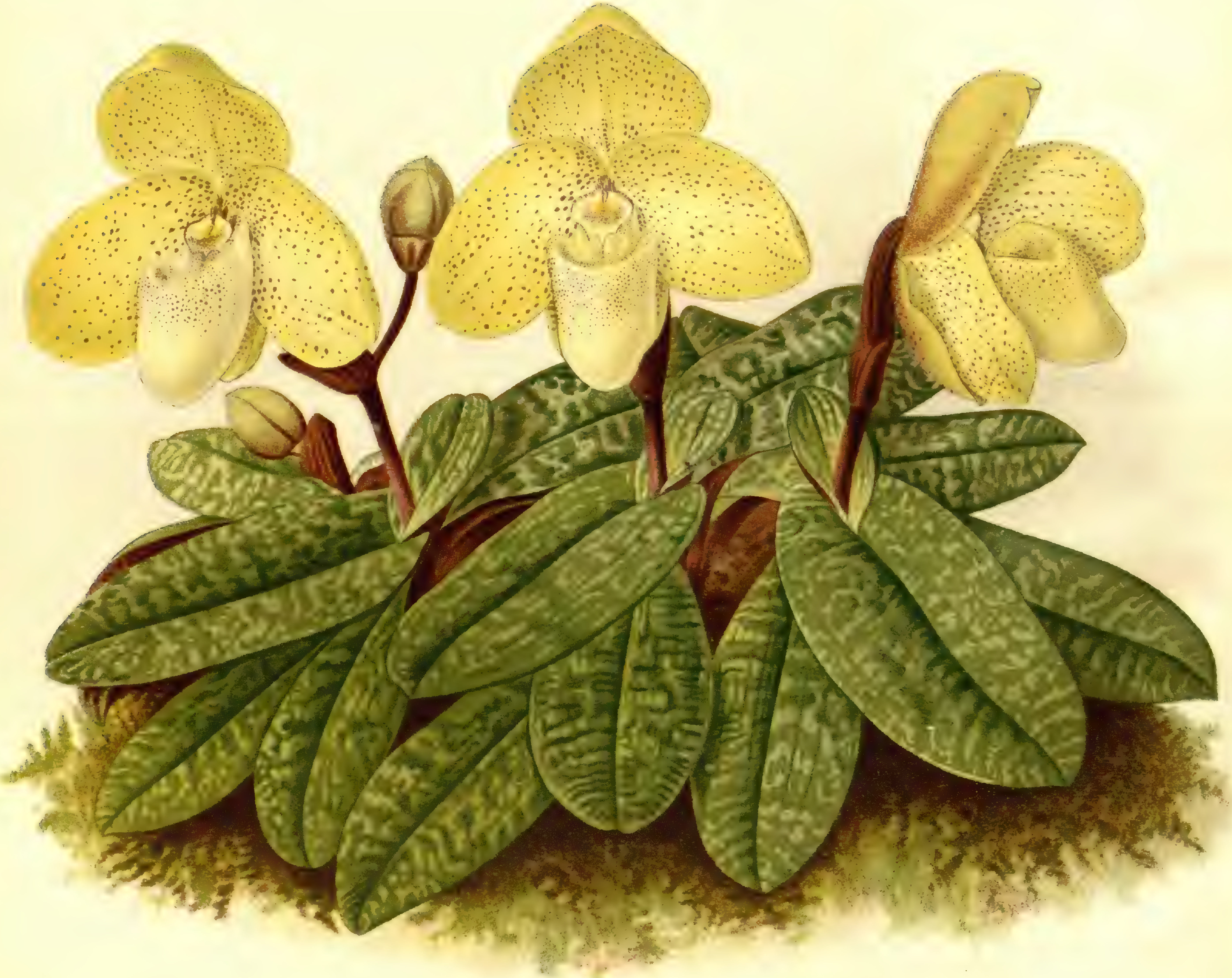
Terrestrial. Acaulescent. *Leaves* distichous, broadly ligulate, unequally acute at the apex, channelled, rich green faintly tesselated with deep green, from nine to twelve inches long, and one and a half to two inches broad. *Scape* stout, erect, reddish purple in colour, pubescent, two to three flowered. *Bracts* ovate acute, about a third the length of the ovary, dull brown streaked with purple; *dorsal sepal* broadly ovate, convex, about two inches across, white suffused with crimson, and streaked with green and crimson-purple; the connate *lateral sepals* similar to the *dorsal sepal*, but paler and much smaller; *petals* ligulate, about four inches in length, and nearly half an inch in breadth, whitish at the base, passing into greenish yellow, streaked with crimson-purple veins, and heavily spotted with purple, more or less regularly arranged in lines, and fringed on the margins with long purplish black hairs; *lip* large and bold, oblong-obtuse, the pouch brown suffused with crimson. *Staminode* papillose, yellowish green bordered with white.

CYPRIPEDIUM EURYANDRUM, *Reichenbach fil.*, *Gardeners' Chronicle,* new series, iv., p. 772; *Veitch*, *Catalogue*, 1880, p. 10, with figure; *Garden*, xix., p, 636, with figure; *Flore des Serres,* t. 2278—2279; *Williams*, *Orchid-Grower's Manual*, 6 ed., p. 244, with figure; *Floral Magazine*, new series, 1875, t. 187 (new hybrid).

The hybrid Cypripediums have now come so much into favour that we are pleased to be able to bring before our readers correct portraits of some of the most beautiful of these wonderful crosses, which are for the most part the result of the hybridiser's skill in this country. What can be a more delightful occupation for amateurs and gardeners than to aim at doing something for the pleasure and enjoyment of others who delight in improving nature's work. Although this is a somewhat difficult matter to accomplish, yet in many instances it has been done. It is astonishing what can be effected through study, and there is yet a wide field open for those who are pursuing this course, now such numerous forms are at their disposal. The Messrs. J. Veitch and Sons, of Chelsea, and others have done much to accomplish this object. *Cypripedium euryandrum* is a distinct hybrid of the Messrs. Veitch's, and is the result of a cross between *C. Stonei* and *C. barbatum*—two well-known species. The offspring partakes of both parents, and is one of the best hybrids we have yet figured; it is robust in growth, and no doubt is a free bloomer, judging by the plant our drawing was taken from, which was grown in the Victoria and Paradise Nurseries.

Cypripedium euryandrum is a plant with beautiful bright shining green foliage of leathery texture, and vigorous habit. The flower scape is produced when the growth is completed; it is stout and hairy, bearing from two to three flowers, of which the dorsal sepal is very broad, roundish and convex, white, stained with crimson and striped with deep crimson-purple and green; the broad petals are much longer than those of *C. barbatum*, whitish at the base, with large purple spots running in lines over their entire length; the lip is similar to that of *C. barbatum*, but larger and of a brownish crimson colour. This plant blooms during October and November, and continues in flower for several weeks.

This Cypripedium requires to be grown in the East India house, and should be shaded from the hottest sun during the summer, but it requires all the light possible to induce it to grow strong. The potting material we use for it is rough fibrous peat and sphagnum moss, with some charcoal intermixed; pot culture suits it best. The plant should be kept moist at the roots, and by having good drainage the water will pass quickly away, which is a very important matter in the general cultivation of plants. This plant requires a good supply of water at the roots in summer, and in winter should also be kept moist, as it has no thick fleshy bulbs to support it. Always keep the foliage plump and vigorous, as this Cypripede is nearly always growing, and sends forth its young growths after the blooming season is over. This is a good time to re-pot, if it requires it; but the plant must not be overpotted. Should it not require to be newly potted, place some new material on the surface; before doing this, however, remove some of the old soil, taking great care not to injure the roots.



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CYPRIPEDIUM CONCOLOR.

CYPRIPEDIUM CONCOLOR.

[PLATE 302.]

Native of Moulmein.

Terrestrial. Acaulescent. *Leaves* distichous, lying nearly flat, oblong-obtuse, channelled, from four to six inches in length, ground colour on the upper side, deep green, beautifully tesselated with very pale green; on the under side the colour is an uniform reddish purple. *Peduncle* (*scape*) somewhat short, reddish purple, clothed with short black hairs, and furnished just below the ovary with a large acuminate hairy bract. *Flowers* usually in pairs, two inches or more in diameter, soft primrose-yellow, speckled and dotted with crimson-purple; *dorsal sepal* ovate or sub-rotund; *lateral sepals* connate, ovate; *petals* deflexed, oblong obtuse, and, as well as the sepals, fringed at the edges with fine black hairs; *lip* saccate, somewhat short and conical, unguiculate, creamy yellow, freckled with crimson-purple dots. *Staminode* subcordate, tapering to a small stiff point, yellow speckled with minute crimson-purple dots.

CYPRIPEDIUM CONCOLOR, *Parish, MSS.; Bateman*, in *Botanical Magazine*, t. 5513; *Id. Second Century of Orchidaceous Plants*, t. 153; *L'Illustration Horticole*, t. 444; *Flore des Serres*, t. 2321; *Gardeners' Chronicle*, 1865, p. 626, with figure; *Id.*, N.S. xix., p. 19, fig. 3; *Florist and Pomologist*, 1870, p, 149, with figure; *Williams, Orchid-Grower's Manual*, 6 ed., p. 242, with figure.

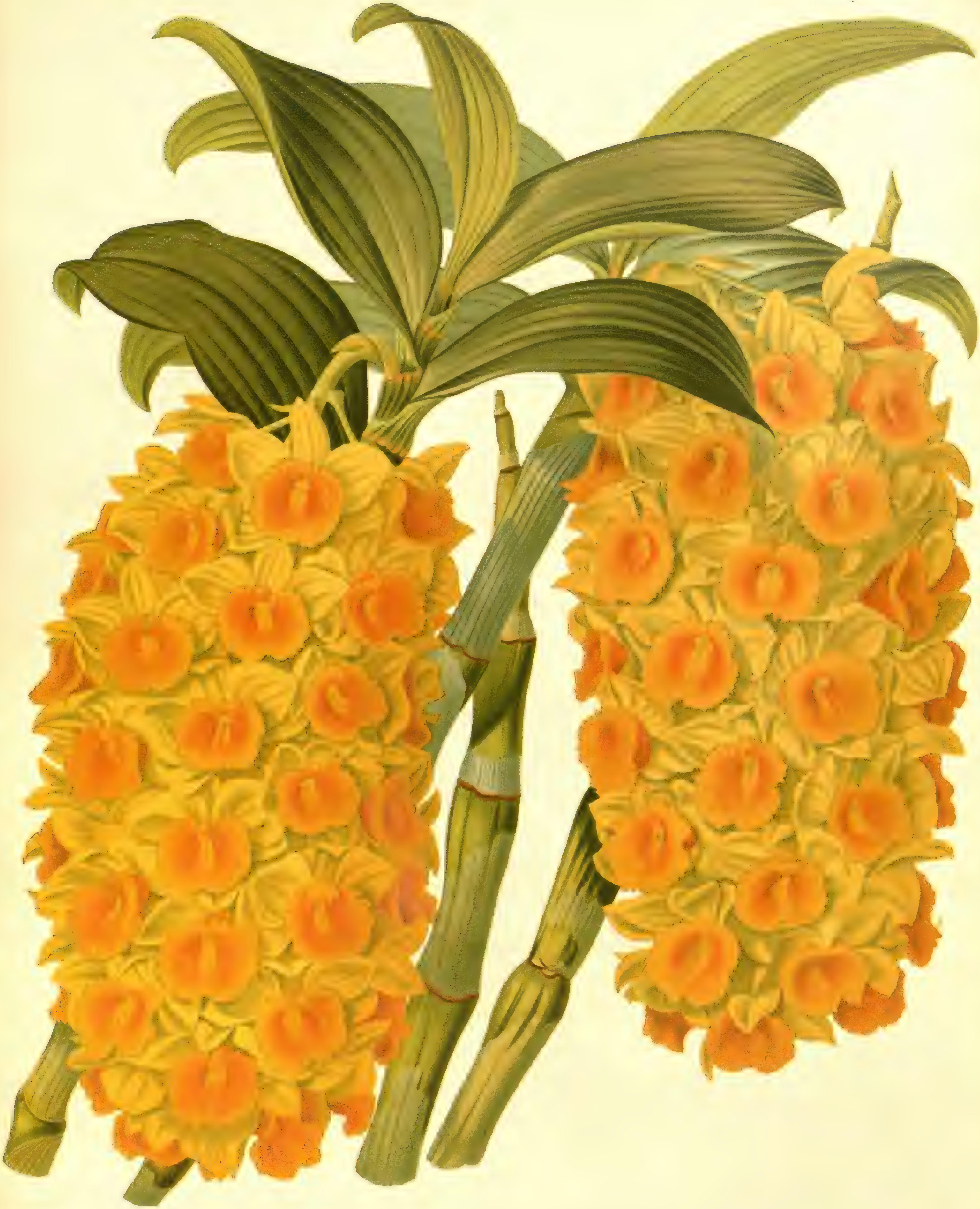
This well-known Cypripedium belongs to the dwarf section of the genus, and a few years ago was almost the only representative of its class in our collections. But during the last few years many others have been introduced to this country by the numerous collectors who are employed to search specially for orchidaceous plants. Amongst the beautiful species of this particular section is the richly spotted *C. Godefroyæ*, which has already been figured in the *Orchid Album*, at plate 171. Previous to this introduction, however, *C. niveum*, which is also a charming species, was introduced to our gardens, and subsequently *C. concolor Regnieri* and others. We have some hybrids, crosses with *C. concolor*, *C. niveum*, and other species, which have brought about some beautiful forms; but all the hybrids obtained from this section appear to be slow growers. There is much work being done in this way, and it will continue, as Cypripediums are easily crossed, and when raised from seed they are not long in attaining a flowering state, which will well repay the hybridiser if care is bestowed in selection, so as to produce distinct and handsome forms. Our artist took his drawing of *C. concolor* from a very prettily-grown plant in the collection of G. Bowles, Esq., 4, Hall Road, St. John's Wood, kindly communicated to us by Mr. Vass, the gardener.

Cypripedium concolor is distinct and beautiful in foliage as well as in flower; it belongs to the stemless section, of which our readers can form a good idea from the plate before them. It is a native of Burmah, being found growing wild upon limestone rocks in the neighbourhood of Moulmein at about 200 to 250 feet elevation. The leaves are prettily variegated on the upper surface, reddish beneath; the scape is short, pubescent, purple, and often produces but a single flower; occasionally, however, two are developed. The flowers, which are produced very freely, are of a delicate pale yellow, and finely speckled with crimson-purple spots There are several varieties, some of which are more spotted than others. The form before us is one of the best that has come under our notice. It generally blooms during the autumn months.

We recommend this Cypripedium to be potted in a compost of fibrous peat from which the fine part has been shaken away, and some broken pieces of limestone mixed with it, adding also some small lumps of charcoal; this mixture will form a good drainage. The plant delights to grow elevated two or three inches above the pot-rim, which is a natural position for it, as it is found in its natural habitat growing on the rocks; the roots will then work down amongst the material. It requires a good supply of water at the roots—always being kept moist, and if the directions here given are carried out there will be little difficulty in growing this plant to perfection. We find it succeeds well in the East India house with a moist heat; during summer we syringe the foliage every morning (most Cypripediums seem to delight in this). Give it plenty of light, but it should be shaded from the burning sun, and grown a short distance from the glass—about two feet, if possible.

This plant is propagated by division as soon as the growth is completed, care being taken that the shoots should not be detached until they have formed some roots. The divided portions should be placed in small pots, with the same material as recommended above; after potting, place them in a shady position until they become established.

PL. 303



J. Nugent Fitch del.

B. S. Williams Publ.

DENDROBIUM DENSIFLORUM.

DENDROBIUM DENSIFLORUM.

[PLATE 303.]

Native of Northern India.

Epiphytal. *Pseudobulbs* erect, clavate, and articulate, furrowed, from one to two feet in height. *Leaves* produced only near the apex, oblong acute, nervose, coriaceous in texture, from four to six inches long, and deep shining green on the upper side, paler beneath. *Raceme* lateral, pendulous and massive, produced from the upper joints of the stem just below the leaves, many-flowered, and furnished with numerous plaited oblong recurved bracts; *sepals* and *petals* ovate-obtuse, spreading, the petals much the broader, rich bright yellow or amber colour; *lip* large, somewhat quadrangular or rhomboid, serrulate on the edge and retuse, colour deep rich orange, the surface clothed with a dense covering of short golden woolly hairs.

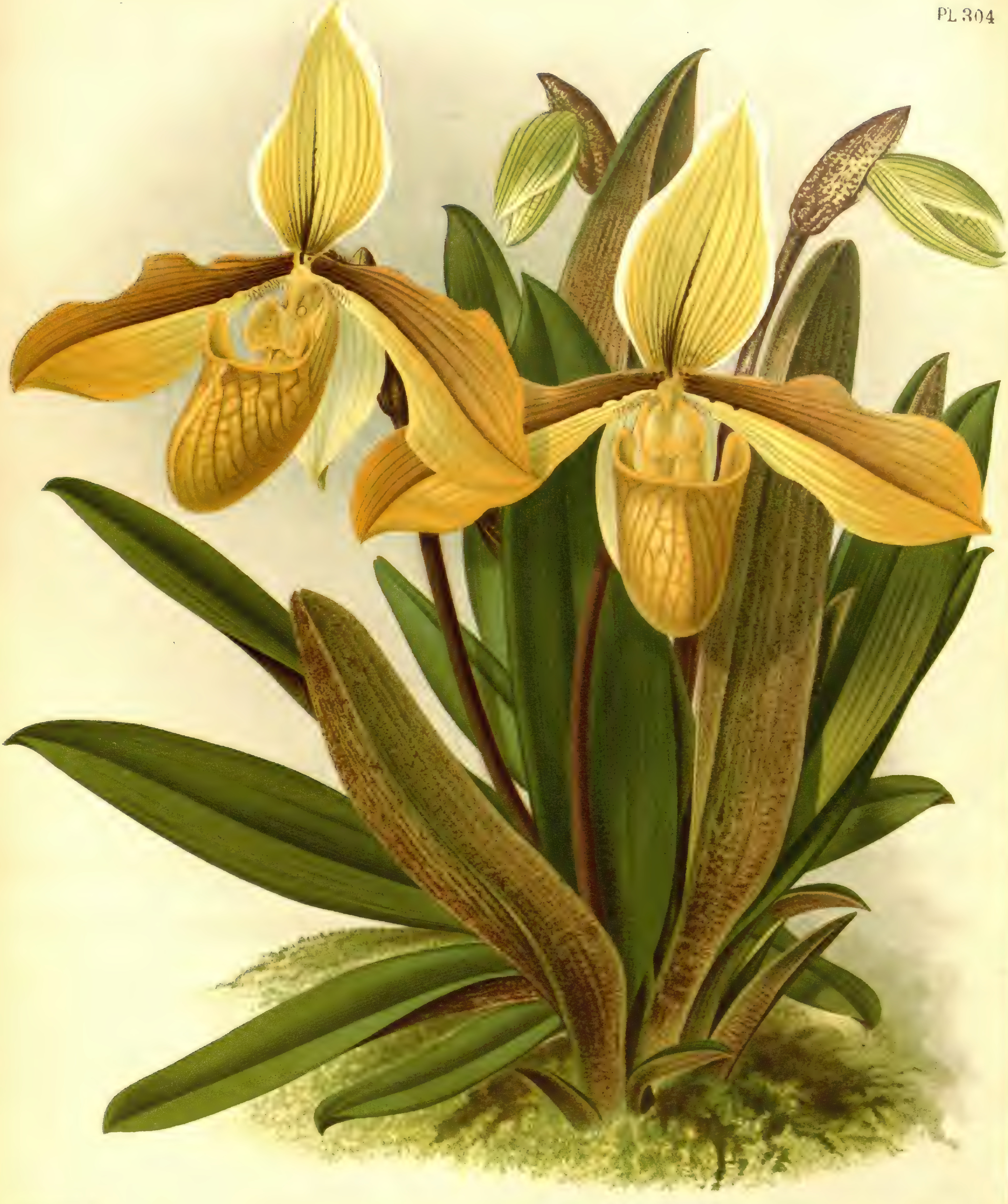
DENDROBIUM DENSIFLORUM, *Wallich, Catalogue*, No. 2,000; *Lindley, in Wallichs' Plantæ Asiaticæ Rariares*, t. 40; *Botanical Register*, t. 1828; *Lindley, Genera and Species, Orchidaceous Plants*, t. 1; *Hooker, Botanical Magazine*, t. 3418; *Paxton's Magazine of Botany*, v., t. 121; *Flore des Serres*, t. 1397; *Williams, Orchid-Grower's Manual*, 6 ed., p. 278.

We have before us one of our oldest favourites, and we think everyone's favourite who has been fortunate enough to witness the grand specimens that now adorn our Orchid houses. At the public exhibitions, many years ago, we have seen plants with nearly a hundred spikes upon them. When in perfect order and in vigorous health this Orchid makes a grand display, producing a beautiful contrast, with its rich green foliage and spikes of bright-coloured flowers hanging gracefully all over the plant; these spikes are from ten inches to a foot in length, and we much regret that space will not permit us to represent them at full length in our illustration. There are some varieties of this species which produce shorter spikes, but they differ greatly in the number of their flowers. The form known as *D. Griffithii* resembles *D. densiflorum*, but the blossoms are paler in colour, and the plant is taller in growth.

Our drawing was taken from a very fine specimen in the grand collection of M. le Comte de Germiny, Chateau de Gouville, France, which had about one hundred and sixty pseudobulbs, and when in bloom was a noble sight. Dendrobes are great favourites of M. le Comte de Germiny, and we do not wonder at it, as there are few Orchids that really surpass them for beauty. Nearly every shade of colour is to be found in the genus, and many of the species are of a most graceful habit, and free in growth, when they get the proper treatment, as they do here, under the care of Mr. Vincent, the energetic gardener.

Dendrobium densiflorum is a splendid compact evergreen species, the foliage being of a delightful green colour. The growth is a foot or more in height, with leaves on the top of the bulb; the flower-spikes proceed from near the top, taking a downward direction. It begins to push out its racemes of flower after the bulbs are well matured, and the blooms usually expand during April and May, continuing in beauty about six days. We cultivate this species in the coolest part of the East India house, and also in the Cattleya house, where it thrives equally well grown either in a basket or a pot, with rough fibrous peat for soil, and good drainage. The plant should be placed three or four inches above the pot-rim, the soil being made firm; a few pieces of charcoal may be intermixed, in order that the soil be kept open, thus enabling the roots to work about freely, which they much enjoy. It requires to be kept moist at the roots during the period of growth, and to be shaded from the hottest sun in summer, but a good light position should be given to it during the whole year. This plant is very accommodating, for it will do well in any warm house, and if the old bulbs are not cut off they will often continue blooming for several years in succession. The finest specimens of this plant we have seen were cultivated intermixed with stove plants and other Orchids. We have frequently seen the foliage of this section of the Dendrobiums become spotted, which we think is caused by subjecting them to too much heat; whilst, in a dry atmosphere, under these conditions the thrip will sometimes attack the foliage. Always keep the plants in a moist house during their active growth, as the beauty of this plant consists in the foliage being in perfect health, as well as the brilliancy of its flowers, for a well-grown plant is an object of attraction even when not in bloom; its foliage is very persistent, lasting healthy for years if it gets the proper requirements. Increase is effected by dividing the plant just before it begins to grow, taking a leading bulb with about two or three others at the back, and potting them in the same material as recommended above.

PL 304



J. Nugent Fitch lith.

B.S. Williams Publ.

CYPRIPEDIUM MEASURESIANUM

CYPRIPEDIUM MEASURESIANUM.

[PLATE 304.]

Garden Hybrid.

Terrestrial. Stemless. *Leaves* two-ranked (distichous), ligulate acute, from six to eight inches in length, and upwards of an inch in breadth, plain, deep green on the upper side, pale green beneath, marbled with dull purple. *Peduncle* one-flowered, purple, pubescent, bearing a large ovate-acute bract, which envelopes the ovary, and is pale green, mottled with purple. *Flowers* about five inches in diameter; *dorsal sepal* ovate-lanceolate, yellow, veined with greenish yellow, and bordered with white; *lateral sepal* ovate, slightly paler in colour; *petals* spathulate, slightly undulate, unequal-sided, light brownish purple, passing into bright orange with age, suffused on the upper part with purple, and having the appearance of being freshly varnished; *lip* large and bold, oblong-ovate, obtuse, dull orange, prominently veined with purplish brown. *Staminode* somewhat obcordate, papillose, notched above and below, with a small point in the lower sinus.

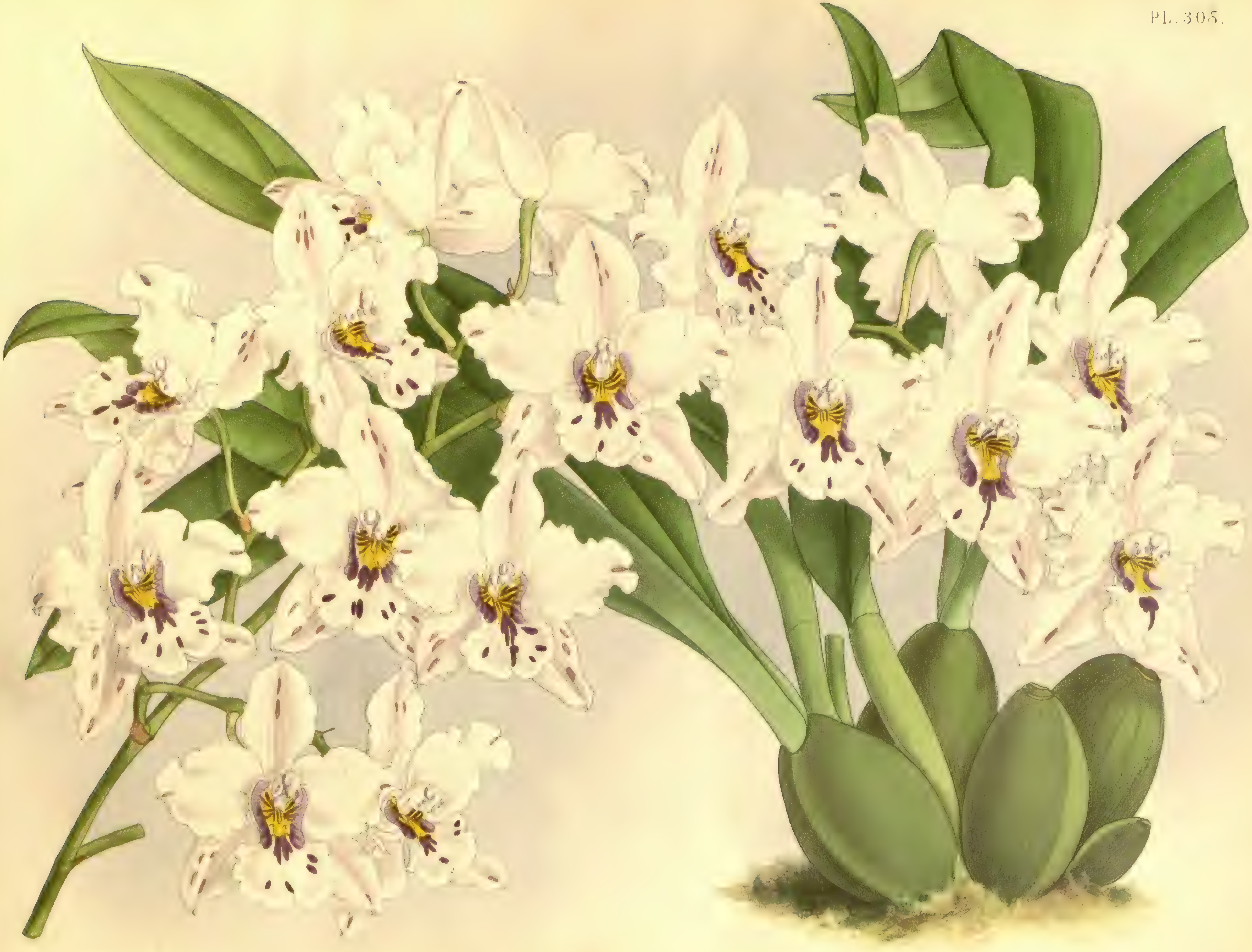
CYPRIPEDIUM MEASURESIANUM, *Williams' New Plant Catalogue*, 1887, p. 18., with fig.

This distinct and splendid new hybrid Cypripedium is a cross between *C. villosum* and *C. venustum,* partaking of both parents in a well-marked form. This great novelty, which is handsome in foliage as well as in flower, thrives well in a cool house, thereby making it a great acquisition. Cultivated in this way the blossoms are of long duration, and become a brighter yellow colour than if grown in a warm house; moreover the longer the flowers are in bloom the brighter and more showy in colour do they become. This is quite a novel feature, for, as a general rule, the longer they are in bloom the less brilliant are the colours. Our artist took his drawing from a fine grown plant in the well-known collection of R. H. Measures, Esq., who had, until recently, the entire stock of this beautiful species. The hybrid Cypripediums are great favourites of Mr. Measures, and he has some of the best specimens in the country, which are well cultivated by Mr. Fraser, the gardener.

Cypripedium Measuresianum is a distinct and handsome hybrid, named in honour of R. H. Measures, Esq., and is of compact growth, with foliage about six to eight inches in length, of a shining dark green colour, the under-side being marked with purple. The flower scape is purple and hairy, as in *C. venustum;* dorsal sepal ovate lanceolate, yellow margined with white, and veined with yellowish green; petals similar in shape to *C. villosum,* of a light brown-purple, changing to bright orange, suffused on the upper half with purple, and possessing the same varnished appearance, which is such a marked feature in that species; lip large, orange, tinted and veined with purplish brown. It blooms during the winter, producing its blossoms very freely, which continue in perfection two and three months—a fact that makes it doubly useful, as at this period of the year all flowers are in great request.

This Cypripedium thrives well in a cool house—that is to say, in a temperature ranging from 45° to 50° during the winter months. The blossoms assume a richer hue in a cool atmosphere, and, as we mentioned before, the older the flowers become the brighter colour they assume, this brightness being retained until the flower falls. This makes the plant of more value to the cultivator, as we have so many Orchids that require a high temperature, and thus anyone who possesses an intermediate house will be able to cultivate this species. Besides this one there are several others that thrive best in an intermediate temperature. We have seen it grown in a higher temperature since our drawing was taken, but the colour of the flower was not nearly so bright a yellow as those represented in the plate we have before us. The material that will suit this plant is good fibrous peat and leaf-mould, adding a small quantity of fibrous loam, and give ample drainage, filling the pot half full, then fill up with the compost to within an inch of the rim, elevating it towards the centre, and place the plant so that the soil covers the roots, make it firm, but do not pot too hard; it delights in porous soil, and enjoys a moderate supply of water when in vigorous growth, which continues nearly all the year round. It should be given all the light possible, care being taken to shade from the burning sun in summer.

PL. 305.



ODONTOGLOSSUM PESCATOREI GERMINYANUM

ODONTOGLOSSUM PESCATOREI GERMINYANUM.

[PLATE 305.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* stout, ovate, smooth and flattened at the edges, upwards of two inches high, deep green freckled with dull purple, changing to reddish brown with age, and then slightly wrinkled, diphyllous. *Leaves* strap-shaped, flat, narrowed at the base, keeled behind, and deep green, much shorter than the erect many-flowered panicle. *Scape* axillary, produced when growth is mature, two to three feet high, much-branched and many-flowered; *bracts* minute, ovate. *Flowers* membraneous; *sepals* spreading, ovate-oblong, terminating in a small point, nearly smooth at the edges, white suffused with rose, and sparingly spotted with rosy purple; *petals* spotted similar to the sepals, but much broader, white and prettily crisp on the edges; *lip* heart-shaped, oblong, contracted in the middle (sub-pandurate), slightly toothed at the base and notched on the margin, white; the disc is furnished with a pair of broad lacerated appendages streaked with rosy purple; *crest* yellow. *Column* white, furnished with two short lacerated wings.

ODONTOGLOSSUM PESCATOREI, *Linden's Catalogue; Id. Pescatorea*, t. 1; *Lindley, in Paxton's Flower-Garden*, iii., t. 90; *Id. Folia Orchidacea, art. Odontoglossum*, No. 56; *L'Illustration Horticole*, t. 407; *Flore des Serres*, t. 1624; *Lemaire, Jardin Fleuriste*, iv., t. 331; *Bateman, Monograph of Odontoglossum*, t. 5; *Warner's Select Orchidaceous Plants*, i., t. 23; *Orchid Album*, iv., t. 175; *The Garden*, 1882, t. 330; *Williams, Orchid-Grower's Manual*, 6 ed., p. 456.

ODONTOGLOSSUM NOBILE, *Reichenbach fil., Linnæa*, xxii., 850.

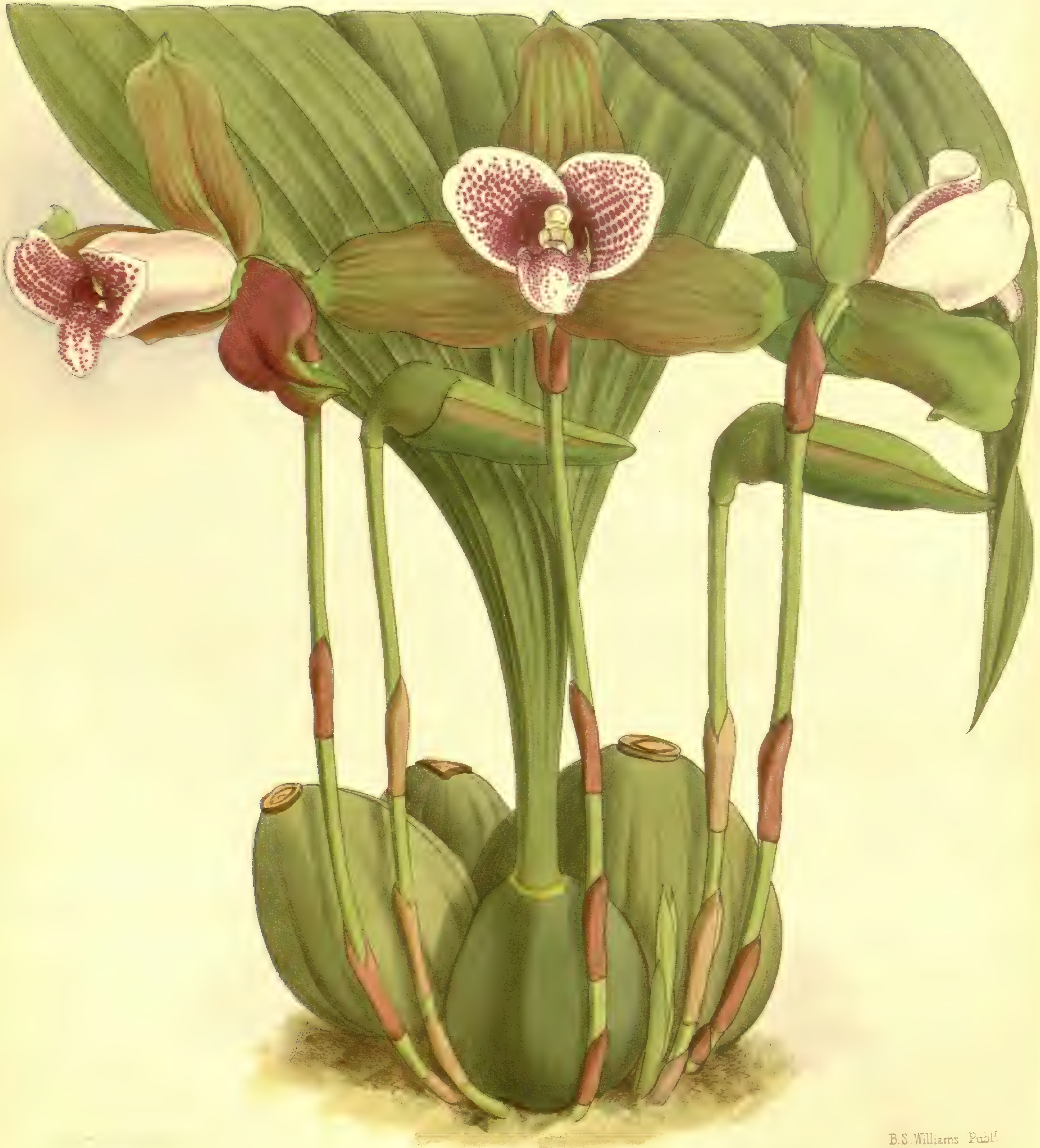
ODONTOGLOSSUM PESCATOREI GERMINYANUM, *Williams, supra.*

We here introduce to the notice of our subscribers one of the most splendid varieties of *Odontoglossum Pescatorei* that we have seen. It is a lovely form, and a great acquisition, as distinct varieties of this beautiful species are not numerous. A grand variety, named *O. Pescatorei Veitchianum*, was figured by us a few years ago in volume II., plate 68, which is also very distinct, having splendid blotches on the sepals and petals; there are also other varieties of great merit which have flowered recently, and which we hope to figure in due course: amongst them we may note a very large form having blossoms of a pure white, with the exception of a little spotting on the upper part of the lip; the flowers of which are both large and of good substance.

Notwithstanding the large importations of *O. Pescatorei* which have arrived in this country during the past few years, it is a matter for surprise that so few variations have occurred amongst them. All that we have seen, however, are very showy, and their branching spikes bear immense quantities of flowers, even on quite small plants, and as these are of long duration this species is extremely valuable for personal adornment, as well as other decorative purposes.

Our drawing was taken from a fine plant grown in the grand collection of M. Le Comte de Germiny, Chateau de Gouville, France, in whose honour it is named. The Odontoglots at Gouville are so well grown that they deserve the highest encomiums; when last we saw them their bulbs were of enormous size, and the young growths promised well for the next season's blooming. We have been induced to make this statement on account of rumours which have spread about, to the effect that cool Orchid-growing has not been a success on the Continent. In the above-named establishment, however, notwithstanding the intense heat of last summer, there has been no deterioration in the health of these plants; of course, they have suitable houses in which to grow, and their special requirements are administered to at just the right seasons; therefore, if other continental growers follow Mr. Vincent's example there cannot be a doubt of success.

Odontoglossum Pescatorei Germinyanum resembles the species in its habit of growth, being an evergreen plant, with compact deep green bulbs, and pleasing green foliage; the flower-spikes proceed from the base of the bulb, bearing dense panicles of lovely blossoms, which are perfect in form and of great substance; the sepals and petals are white the former being flushed with rose, and both having a few spots of rosy purple scattered over their surfaces; the lip is also white with occasional spots of rosy purple on the anterior part, whilst the basilar portion bears a band of rosy purple on either side. This plant flowers in July and August, and continues in bloom for six weeks or more. The system adopted in the cultivation of these plants at Gouville is to keep them in small span-roofed houses, having central paths and tables on either side; the range is a long one, and has divisions of about thirty feet in length, each kind being grown in separate divisions; *O. Pescatorei* and *O. Alexandræ*, however, are cultivated together, and the plants are kept near the glass. The compost used for them is fibrous peat and sphagnum moss, the pots are well drained, and the plants are elevated above the pot-rim; they receive a moderate supply of water during their growing season, and being well potted the water passes off quickly, which is one of the principal requisites for the successful cultivation of these plants, as, although they like to be kept moist, the moisture must not be allowed to stagnate, or it soon causes the soil to get into a bad condition, which is rapidly followed by decay of the roots and shrivelling of the bulbs. If decay from any cause takes place, the old soil should be at once removed, the decaying matter cut away, and the bulbs washed, replacing them in as small sized pots as the plants will allow in order to quickly induce the formation of new roots; when the plants are again established they may be re-potted. During the period of rest the soil should be kept slightly moist until the plants begin to show their flower-spikes above the foliage, at which time a larger supply of water may be given to encourage vigour, and enable the spikes to produce fine blossoms.



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LYCASTE PLANA MEASURESIANA.

LYCASTE PLANA MEASURESIANA.

[PLATE 306.]

Native of Bolivia.

Epiphytal. *Pseudobulbs* oblong-obtuse, slightly angular, some three inches high, intense deep green, bearing on their summit two or three very large leaves, which are oblong-lanceolate and acuminate, much plaited, about eighteen inches long, and two-and-a-half inches across, deep green on both surfaces. *Peduncle* radical, green, furnished with numerous large lanceolate, sheathing, brown bracts, the upper one enclosing the ovary, much the largest and cucullate, bearing a single flower on the apex. *Flowers* spreading, three or four inches in diameter; *sepals* oblong-acute, connate at the base, spreading, of a reddish bronze, tipped with green; *petals* similar in shape to the sepals but shorter, with smooth edges, projecting forward and forming a hood over the column, recurved at the tips, white, profusely ornamented with bright rose-coloured spots and dots, which are disposed in regular lines, leaving a clear white marginal border; *lip* small, trilobed, lateral lobes slightly crenate, middle lobe ovate, serrulate, recurved at the tip, white, thickly studded all over with bright rose-coloured dots; *callus* obtuse, slightly raised and somewhat three-lobed. *Column* pubescent, white.

LYCASTE PLANA, *Lindl.*, *Botanical Register*, 1842, *misc.* 96; *Id.*, 1843, t. 35, *et misc.* p. 15; *Orchid Album*, v., t. 230; *Williams*, *Orchid-Grower's Manual*, 6 ed., p. 380.

LYCASTE PLANA MEASURESIANA, *Williams*, *supra*.

A few years back the number of species of Lycaste existing in our collections was very small; now, however, these conditions are changed, several new species and varieties having been introduced by our collectors, and many beautiful forms now grace our plant houses, and we are glad to observe that Lycastes are rapidly increasing in favour with Orchid cultivators. The variety now under consideration is at once so distinct and beautiful in itself, that it will doubtless tend to create an increased taste and love for the various beautiful forms with which this genus abounds.

Lycaste plana Measuresiana produces a considerable number of blossoms from a single bulb; and, as will be seen by the drawing, it has most lovely spotted flowers, and is distinct from, and much superior to the typical *L. plana*, characters which should render it popular, and ensure it a place in every collection of Orchids.

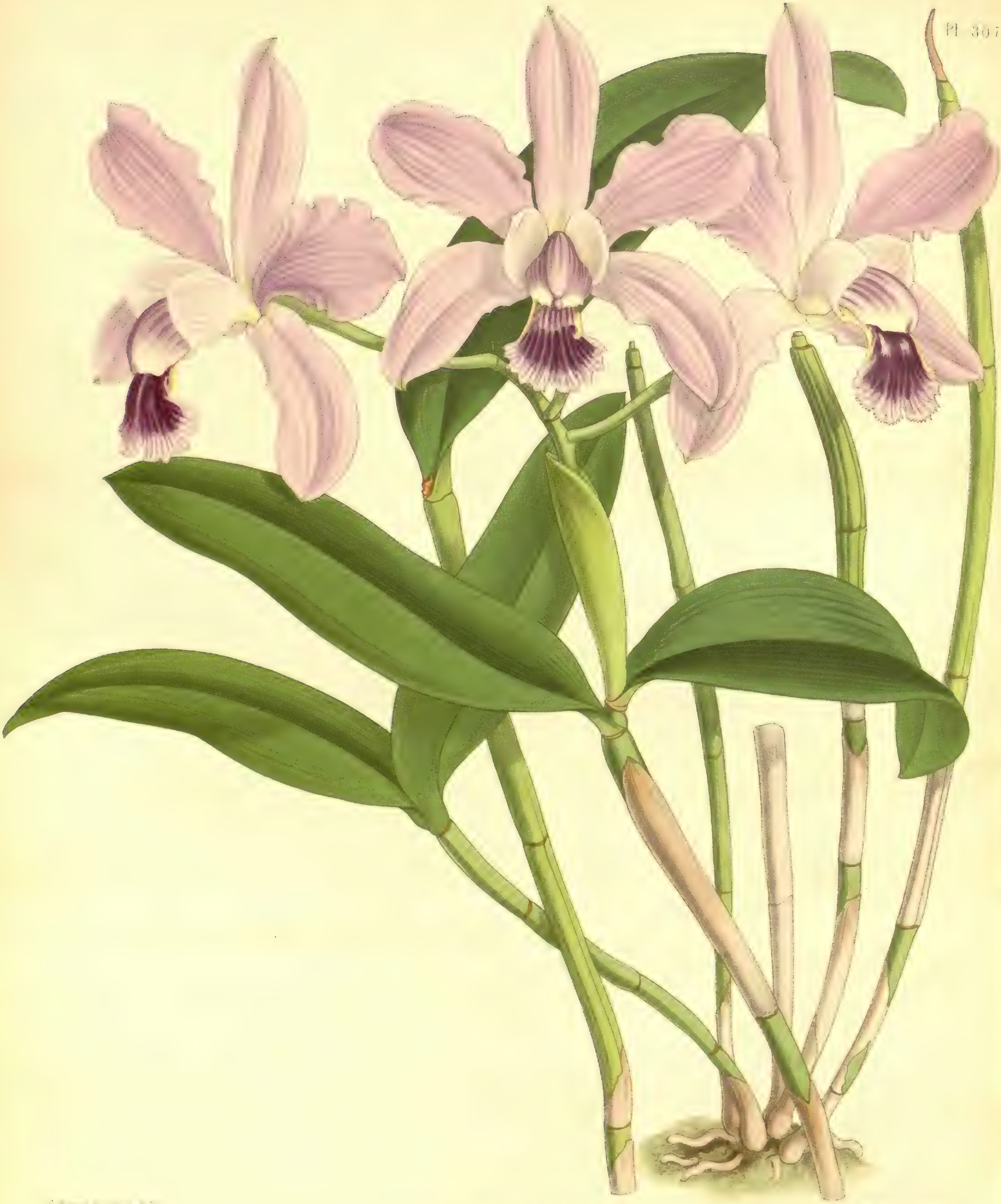
Another beautifully spotted variety of Lycaste—*L. Deppei punctatissima*—we have also figured in our sixth volume, plate 262; this is very rare, and we believe it only exists in one collection, that of Sir Trevor Lawrence, Bart., M.P., at Burford Lodge, Dorking, and it was from this plant that our figure of that variety was taken.

Lycaste plana would appear to be a somewhat variable species, and we saw last year several varieties of it in bloom, but all were much inferior in beauty to *L. plana Measurrsiana.* Our plate was taken from a plant growing in the fine collection of R. H. Measures, Esq., The Woodlands, Streatham, after whom this variety is named.

Lycaste plana Measuresiana is a free-growing plant. In general habit it resembles the species, having the same ovate-oblong, ribbed pseudobulbs, and bold oblong-lanceolate, plicate leaves of a bright green colour. The sepals are reddish brown, tipped with green, the petals and lip being white, regularly spotted with bright rose, the margins of the petals destitute of spotting. It blooms during the autumn and winter months, and lasts several weeks in perfection. This Lycaste requires the same treatment as the typical *L. plana,* which is figured in our fifth volume, plate 230; and the instructions there given for its cultivation will apply equally well for this plant. Mr. Fraser, gardener to Mr. Measures, treats the Lycastes in the way we recommend, and is very successful; the healthy appearance of the plants, and the profuse manner in which they bloom, leaving nothing to be desired.

Mr. Measures, we believe, possesses nearly all the species and varieties of Lycastes that have hitherto been introduced, that are sufficiently showy to merit a place in an Orchid collection.

Pl. 307



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CATTLEYA SORORIA.

CATTLEYA SORORIA.

[PLATE 307.]

Native of Brazil.

Epiphytal. *Pseudobulbs* stem-like, slender, terete, jointed at distant intervals, slightly furrowed, and partially clothed with numerous somewhat lanceolate-acute membraneous sheaths, from nine inches to a foot in height, diphyllous. *Leaves* oblong-acute, from three to five inches long, and about an inch broad, alternate, coriaceous in texture, and deep green. *Scape* terminal, rising from between a small oblong, ancipitous spathe, bearing three or more flowers, each of which is upwards of three inches in diameter. *Sepals* oblong-acute, the lateral ones slightly falcate; *petals* oblong-obtuse, undulate on the edges, and, like the sepals, of a uniform pale magenta; *lip* three-lobed, lateral lobes small, erect, projecting into a short stalk, not enclosing the column, of a pale delicate rose colour, anterior lobe triangular retuse, emarginate, serrated and undulate at the edge, bearing on the disc a quantity of little asperities, light purple, streaked with lines of deep magenta, stained in the throat with yellow. *Column* stout, white, streaked in front with purple lines, and stained at the base with yellow.

CATTLEYA SORORIA, *Reichenbach fil.*; in *Gardeners' Chronicle*, Third Series, 1887, i., p. 40.

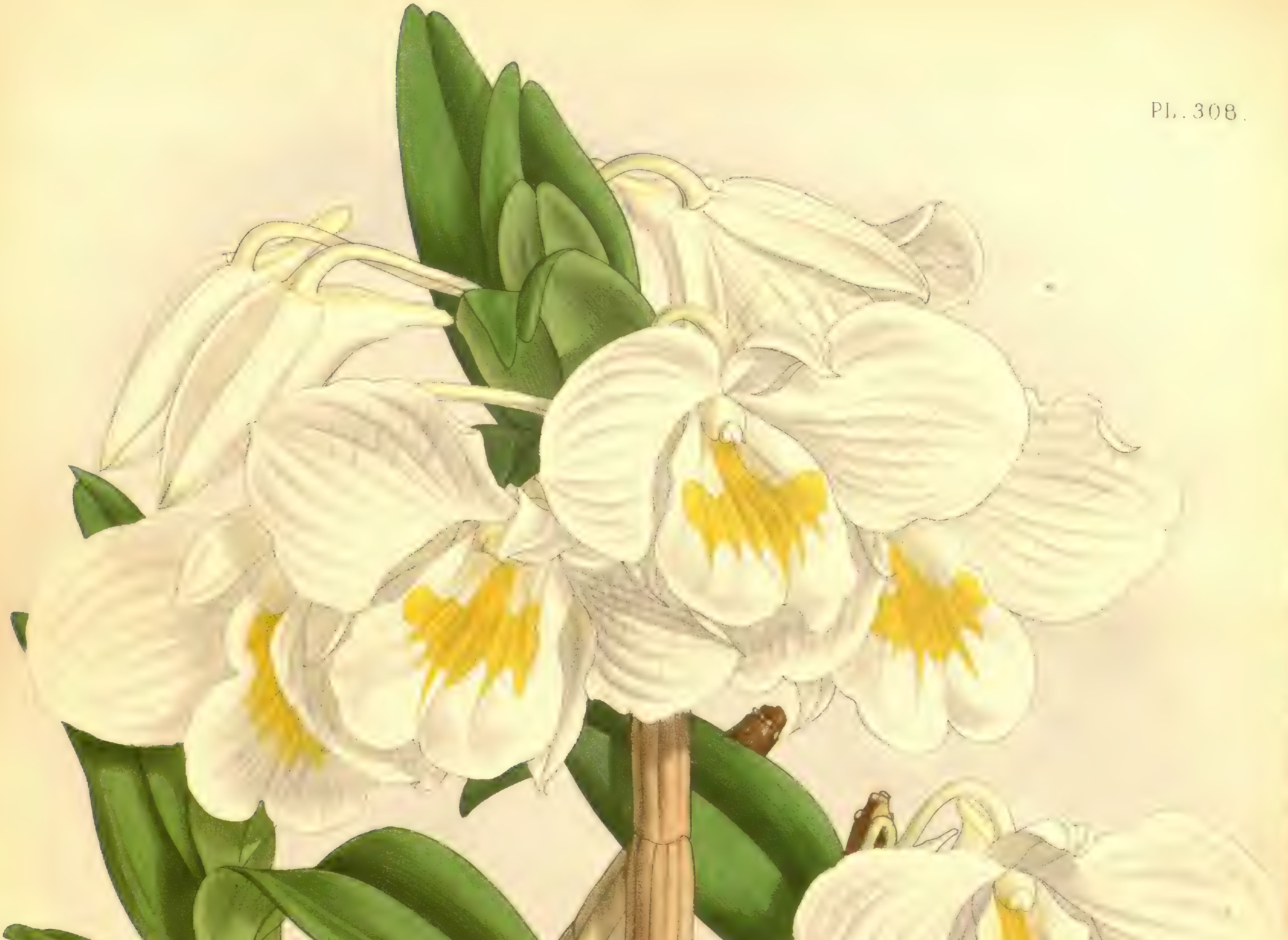
This new Cattleya is a distinct and delicate plant, and is one that will be sure to find favour among those who can appreciate quiet colours, and also as a contrast to the numerous kinds of a showy and larger type. The subject of our present plate comes into bloom when the majority of Cattleyas are past, and at a season when there is usually a scarcity of flowers among Orchids. It was imported by us from Brazil, with other Cattleyas of similar growth, such as *C. bicolor*, *C. velutina*, etc., etc. It appears to be a rare plant, as the specimen here figured is the only one we have seen, and which flowered in the Victoria and Paradise Nurseries, in the month of July of last year, and again in the early part of the present year, upon which occasion it was named by Professor Reichenbach, and described by him in the *Gardeners' Chronicle.* In all probability there will be many new forms found in the locality from whence *C. sororia* was obtained, as several species are found in the same district, thus affording an opportunity for various members of the insect world to cross-fertilise them, and thus originate new varieties.

Cattleya sororia is an evergreen plant; its slender bulbs are about twelve inches high, bearing two leaves, which are about three inches in length, and dark green. The sheath from which the flowers issue is small, and the spike is three-flowered, but when the plant becomes more fully established it may bear a larger quantity. The sepals and petals are pale magenta, anterior portion of the lip streaked with deep magenta-purple, whilst the side lobes are of a pale delicate rose colour. This Cattleya requires somewhat different treatment to those of the *C. labiata* section, which have stout pseudobulbs to them, and requires more care and attention from the hands of the cultivator. It should have more moisture in order to maintain the bulbs in a plump condition, for if these are allowed to shrivel from drought little hopes can be entertained of recovery. We find it beneficial to the well-being of this plant to syringe the pseudobulbs every day during the early summer months, at which time the plant is in active growth; care being taken not to saturate the young shoots. It also enjoys a moderate amount of moisture at the roots during the autumn, and if so treated it will be found to root very freely. The compost should consist of rough fibrous peat, from which all the fine particles have been shaken, and living sphagnum moss; the latter will be found very advantageous to the young growths, as it exhales a genial moisture, whilst the addition of some moderate-sized nodules of charcoal, or some pieces of broken potsherds will greatly assist in keeping the soil porous, and be highly beneficial. The drainage must be ample, and should be maintained in good open order; quite three-parts of the pots being filled before inserting any soil, and the plant should be elevated upon a cone-like mound, some two or three inches above the rim; potted in this way the roots are not confined, but can ramble free, as is their natural habit.

The various species belonging to this section dislike being disturbed, and when in perfect health this should be avoided as much as possible. If they require re-potting it is best effected just as the plants are starting into growth, and this operation must be performed with great care so as to avoid injury to the roots. It is far preferable to break a pot than to injure a single living root, and should there be any dead roots, cut them away before placing the plant in the new material. After potting, the plants should be stood in a shady part of the house for a few weeks, after which they may be placed with the established plants in the general collection.

We find this plant requires to be grown at the warm end of an intermediate house. During the hot days of summer it must be shaded during the mid-day heat; but it requires a great deal of light, and, therefore, must be placed near the glass. During the resting season, which is very short, water must not be entirely withheld; a little moisture now and then will be found advantageous, tending to keep the bulbs plump.

PL. 308.



J. Nugent Fitch del et lith.

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DENDROBIUM FORMOSUM GIGANTEUM.

DENDROBIUM FORMOSUM GIGANTEUM.

[Plate 308.]

Native of Burmah.

Epiphytal. *Pseudobulbs* stem-like, stout, erect, terete, and jointed, becoming furrowed with age, from a foot to eighteen inches high, enclosed in the membraneous bases of the leaves, which when young are clothed with a profusion of short, black hairs. *Leaves* distichous, oblong-lanceolate obtuse, unequally bilobed at the apex, bright green. *Scape* short, four or five-flowered, produced from the apex, and also from the axils of the leaves nearest the point of the pseudobulb. *Flowers* pure white, stained with orange-yellow, deliciously fragrant, and about five inches across; *sepals* small, ligulate acute, produced behind into a conical spur; *petals* very much broader than the sepals, and like them pure white, obovate and apiculate; *lip* large, obovate, dilated and retuse, white stained on the disc with a broad blotch of rich orange, which is continued to the base in a raised central line. *Column* short, obtuse, white.

Dendrobium formosum giganteum, *Van Houtte, Flore des Serres*, t. 1633; *Gardeners' Chronicle*, 1882, xvii. p. 369, fig. 54; *Williams' Orchid-Grower's Manual*, 6 ed., p. 284.

Dendrobium formosum is undoubtedly one of the most chaste and beautiful of all the Asiatic Orchids which have yet been introduced. It is found in a wild state growing on the plains and hills about Rangoon and Moulmein, near the coast, where the average temperature ranges between 80° and 85° Fahr. It is a very old inhabitant of our Orchid houses, having first been introduced into this country in the year 1837, and we ourselves grew and exhibited it at the Horticultural Society's Gardens at Chiswick, and at the Royal Botanic Society's Gardens in the Regent's Park, London, upwards of forty years ago, where its snowy-white and orange-yellow flowers rendered it extremely popular. The plant we here represent is a very fine variety of *D. formosum*, called *giganteum*, which is more robust in constitution, while its growths are stouter, and its flowers much larger. Moreover, when grown well it produces a greater quantity of blossoms on the stem.

Dendrobium formosum giganteum was originally introduced by the Messrs. Low, of Clapton, about the year 1856, from Rangoon; since then, however, large importations of this showy variety have from time to time reached this country, and to maintain it in our collections it still requires to be frequently imported, as it does not appear to flourish for any length of time under cultivation. The best plan is to replenish one's stock annually, which is not a heavy tax, as the newly imported plants are sold at a very low price; and if they arrive in the spring they will grow and bloom the same year, and produce a superb display. Our illustration was taken from a very fine specimen which bloomed with us during the month of August of the present year in the Victoria and Paradise Nurseries, Upper Holloway.

Dendrobium formosum giganteum is a splendid evergreen variety of compact habit, belonging to the Nigro-hirsute section with stout, terete stems, a foot or more in height, clothed with short black hairs, and bearing thick, ovate, obliquely emarginate leaves. The flowers, which proceed from the top of the stem in clusters of four or five, are very fragrant, yielding the perfume of Almonds, the individual blooms measuring from four to five inches across. The sepals and petals are pure white; lip also white, ornamented on the centre with a broad blotch of rich orange-yellow. The typical *D. formosum* and this variety both bloom during July, August and September, continuing in full beauty for several weeks.

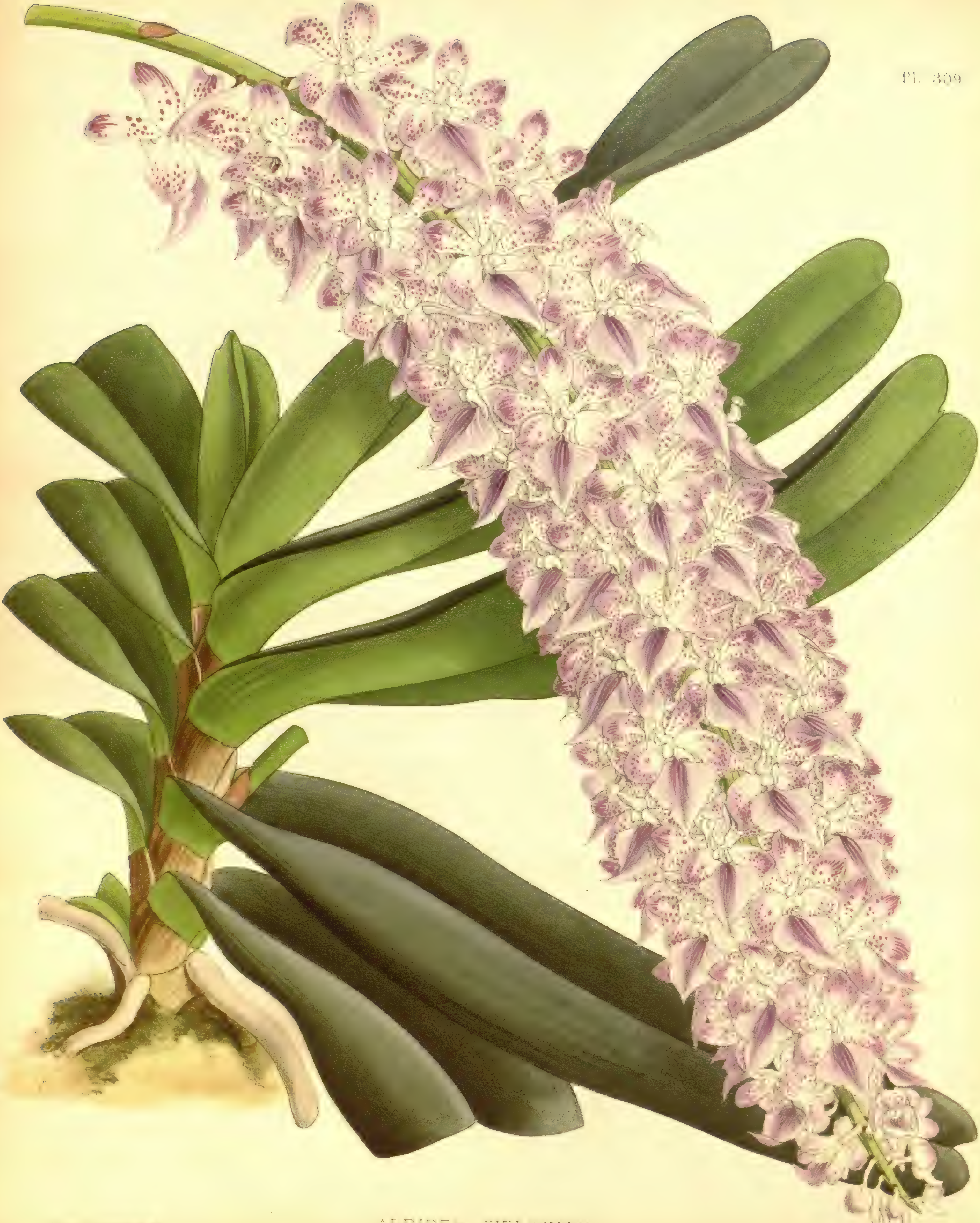
We find this plant grows best in the East India house, although we have also found it thrive when placed at the warmest end of the Cattleya house. We always suspend it near the glass, so that it can obtain full light and abundance of sun-heat, shading it only just sufficient to break the direct rays during the hottest part of the day; if this is not done the foliage is liable to become burnt, a condition which greatly disfigures the plant, for the rich green of its leaves contrast admirably with its large white blossoms, and materially contribute to the general effect.

We also find this Dendrobe to thrive suspended from the roof of a stove associated with a mixed collection of tropical plants, and it appears to derive much benefit from the moisture which arises from the various plants located below it. We invariably cultivate this plant on blocks of wood, or in baskets; if grown on a block it requires to be syringed at least once every day in the summer, and sometimes when the weather is very hot and dry, twice a day will not be too much; on the other hand, if grown in baskets, it will not require such frequent applications of water from the syringe, but the material in which it is planted must be always kept moist. When the growth is finished and the blooms are past, less water will suffice—just sufficient to keep the bulbs and foliage plump will be all that is required, whilst in order to ripen its bulbs and enable it to make stout growths the following season, it must be kept near the glass. As before remarked, this Dendrobium is not, as a rule, a long-lived plant under cultivation, yet we have seen specimens which continued to flourish for several years in succession.

We find rough fibrous peat and living sphagnum moss to be the best materials in which to grow this plant; it does not require a great quantity of this about its roots, but it must always be maintained in a fresh and sweet condition, whilst the drainage must be ample and in good order. It is best to renew the peat and moss every year, and this operation should be performed just before the plant sends forth its new growth and roots; should there be any of the old roots in a sound and healthy state, they should be carefully preserved.

This plant is very subject to the attacks of white scale and thrips, just at its growing time, and these enemies must be kept under; we find steaming with tobacco juice used in the Thanatophore, an effectual remedy; this system of battling against insect pests is now largely adopted by Orchid growers at the present time, and with very satisfactory results.

PL. 309



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AERIDES FIELDINGII

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AËRIDES FIELDINGII.

[PLATE 309.]

Native of Northern India.

An erect-growing epiphytal plant, producing from the base of its stem numerous long, stout, and fleshy white roots. *Leaves* distichous, broadly lorate, sheathing at the base, obliquely two-lobed at the apex, and channelled; they are thick and leathery in texture, from eight inches to a foot long, and from an inch and a half to two inches across, rich dark green in colour; in some varieties the sheathing bases of the leaves are of a deep brownish black. The raceme is axillary, very dense, from two to three feet long; in some forms of the plant it is simple, in others it is more or less branched. *Flowers* large; *sepals* and *petals* nearly equal, spreading, oblong-obtuse, white, flushed and mottled with bright rose; *lip* flat, ovate-acuminate, rich rose colour. *Column* erect, in profile resembling the head of a young pigeon.

AËRIDES FIELDINGII, *Lindley*, Ubi (?) *La Belgique Horticole*, 1876, tt. 18-19; *Jennings' Orchids*, t. 20; *Williams, Orchid-Growers' Manual*, 6 ed., p. 101; *Lindenia* iii., t. 97.

We have no hesitation in saying that *Aërides Fieldingii* is one of the grandest species of this now numerous and magnificent genus. It is a most distinct plant, both in flower and foliage; and is not difficult to grow into fine specimens, as lateral growths are oftentimes produced from near the base of the stem, which eventually grow up and add to the display of blooms. The spike in some varieties is simple, as here represented, but in others it is more or less branched, two feet or more long, and the racemes are many-flowered.

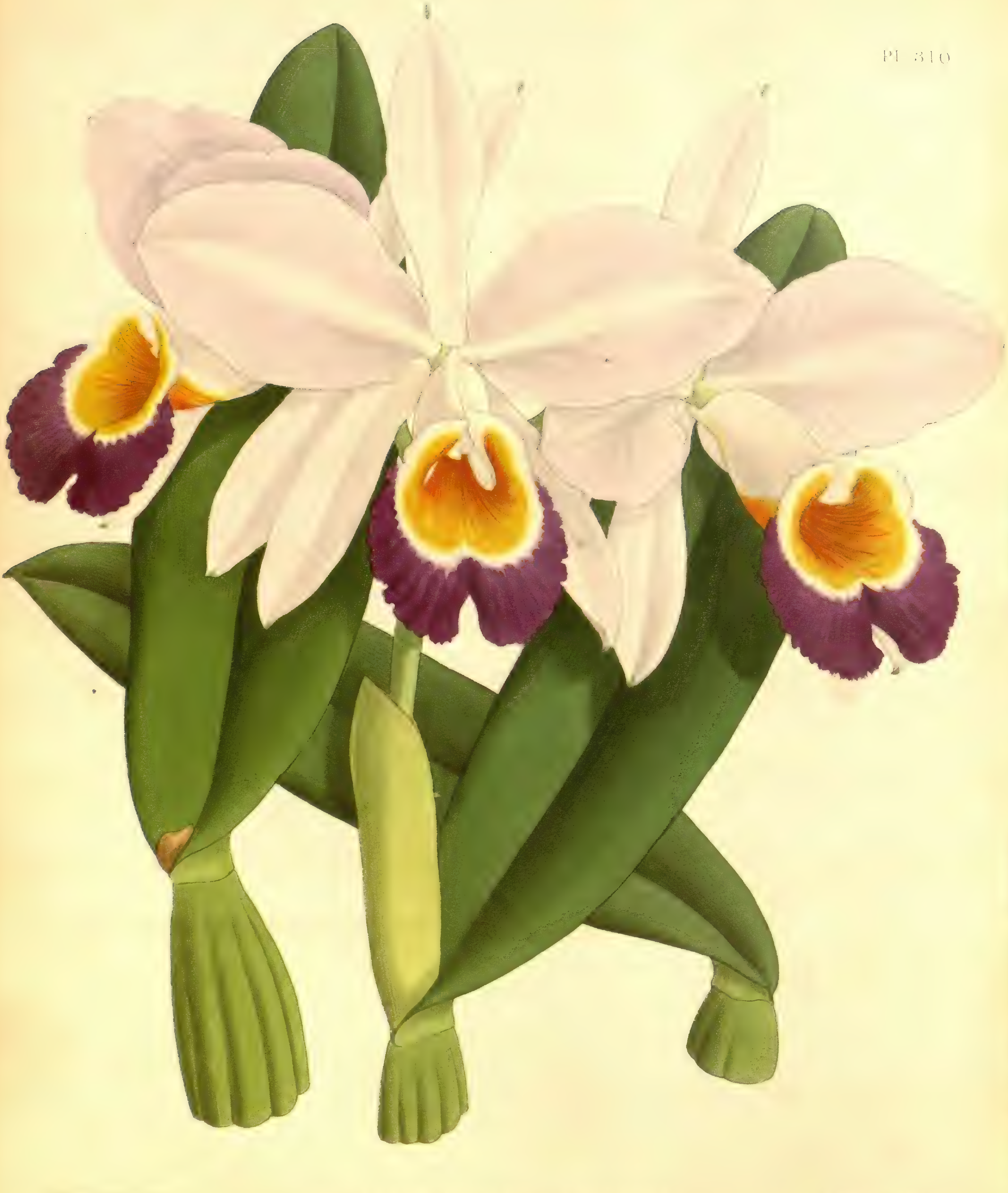
This species is popularly known as "The Fox-brush Aërides," and from its long, symmetrical, and dense racemes of bloom, the name is very applicable.

Aërides Fieldingii was introduced to our collections about the year 1855, and for a long time was exceedingly scarce, but in the year 1870 we ourselves imported a large quantity of this plant from Upper Assam. These plants arrived in excellent condition, and proved to be a superb form, so that from that time the species has been more plentiful. During the last thirty years many wonderful specimens of this plant have from time to time been exhibited at the Royal Horticultural Society's shows; at the exhibitions of the Royal Botanic Society in the Regent's Park; and also at those of the Royal Botanic Society of Manchester, and when well bloomed there is no Aërides to surpass, and few to equal it, for its stately habit and the beauty of its inflorescence. The plant from which our drawing was taken was one of many which flowered with us in the Victoria and Paradise Nurseries, during the past season.

Aërides Fieldingii is a bold-growing evergreen species, with handsome foliage, from ten inches to a foot long, about two inches across, and rich dark green in colour. The spikes are produced from the axils of the leaves, and vary from one to three feet in length, and the racemes are very dense. The flowers are large, white, beautifully mottled with clear bright rose, the lip being wholly rich rose colour. It blooms during May, June, and July, and continues in full beauty for three or four weeks. When in flower this plant should be placed upon a pedestal, or in some elevated position, in order to fully display the beauties of its long pendent racemes. We may, however, remark, *en passant*, that there are some varieties of this species which produce shorter racemes of bloom than the one we have here described.

This Aërides succeeds well with us when placed at the warmest end of the Cattleya (or Intermediate) house, where it is grown upon the side tables, and experience proves to us that the majority of the species of Aërides do not require such a high temperature as is generally supposed necessary for their successful cultivation. We grow most of the different kinds of Aërides together in the same house, and they thrive admirably, forming robust growths, and flowering most profusely; they are treated to a fair amount of moisture during the summer, administered to them by syringing between their pots every day (on exceptionally hot days they will be benefited by slightly sprinkling their foliage with water from a fine-rosed syringe), but their roots should always be kept moist during the summer and autumn months; in winter, however, much less is required, but the plants must not be allowed to suffer through lack of water, as at this time they are still growing slowly, and developing their flower-spikes. During the winter months the night temperature may range between 55° and 60°, and during the day it may be allowed to rise a few degrees higher, especially with sun heat. In summer they will be found to thrive well in the same temperature as that recommended for Cattleyas. The best material in which to grow Aërides is living sphagnum moss, but the drainage must be thorough and always kept open and free. If pots are used in their cultivation, fill them three-parts full of broken potsherds, and upon this place the sphagnum; in this moss, with the addition of a few potsherds or nodules of charcoal intermixed, the roots should be placed; if grown in hanging baskets the system should be just the same, but for the sake of decreasing the weight, the drainage material may be nearly all charcoal. Aërides require to be exposed to the full light during winter; in summer, however, they must be shaded during the hottest part of the day, but when the sun is not shining, no shade will be necessary. The blinds for shading purposes should be made of some thin material, as heavy shading is dangerous and tends to produce weak foliage, whereas it should be strong and robust, for in this lies the whole secret of the good cultivation of these plants; and if our directions are followed they will make vigorous, rich green leaves, and flower in perfection. Two most important items in the cultivation of Aërides are to keep everything surrounding their roots in a sweet and clean condition, and to see that their foliage is clean and free from insects.

Pl. 310



CATTLEYA ELDORADO SPLENDENS.

CATTLEYA ELDORADO SPLENDENS.

[PLATE 310.]

Native of the Rio Negro district in Brazil.

Epiphytal. *Pseudobulbs* stout, erect, clavate, furrowed, some six or eight inches high, bearing upon the summit a single oblong ligulate, obtuse, erect leaf, which is thick and coriaceous in texture, and deep green. *Peduncle* issuing from a large oblong acute spathe, bearing one to three flowers, each of which is upwards of five inches across; *sepals* oblong, lanceolate, clear rose colour; *petals* ovate-obtuse, unguiculate, slightly undulate on the edges, much larger than the sepals, but of the same clear rose-coloured hue; *lip* large, cucullate, somewhat quadrate, and emarginate in front, spreading and deeply toothed round the edge; the throat is rich deep orange (as in the typical plant), banded all round with a circle of white, the anterior portion being rich violet-purple, which colour also extends round the whole margin, whilst the convolute portion of the lip is of the same colour as the petals.

CATTLEYA ELDORADO, *Hort. Linden*; *Flore des Serres,* t. 1826; *Williams, Orchid-Growers' Manual,* 6 ed., p. 181; *De Puydt, Les Orchidées,* t. 8.

CATTLEYA ELDORADO SPLENDENS, *Linden, L'Illustration Horticole,* 1870, t. 7; *Williams, Orchid-Growers' Manual,* 6 ed., p. 181.

In the year 1866, Mr. Gustav Wallis, then travelling in Brazil for M. Linden, when exploring the low-lying district near where the waters of the Rio Negro are poured into those of the Amazon, he discovered a new Cattleya, which, on being sent to Brussels, received the name of *C. Eldorado*; the plants sent home grew well, and in the following year some of them were exhibited in bloom by M. Linden. The form of *C. Eldorado* which we now figure is also one of M. Linden's introductions, and is far more beautiful than the typical plant.

We have already figured many different species and varieties of handsome Cattleyas in this work, but *C. Eldorado splendens* will ever stand in the first rank, even amongst such a collection of rare beauties. And although there have been large quantities of the ordinary type introduced by M. Binot and other importers, this splendid variety is still rare. There is great dissimilarity in the different importations, varying from pure white to deep rose, and intermediate colours, which, indeed, is the case in most consignments of Orchids, and especially so with Cattleyas.

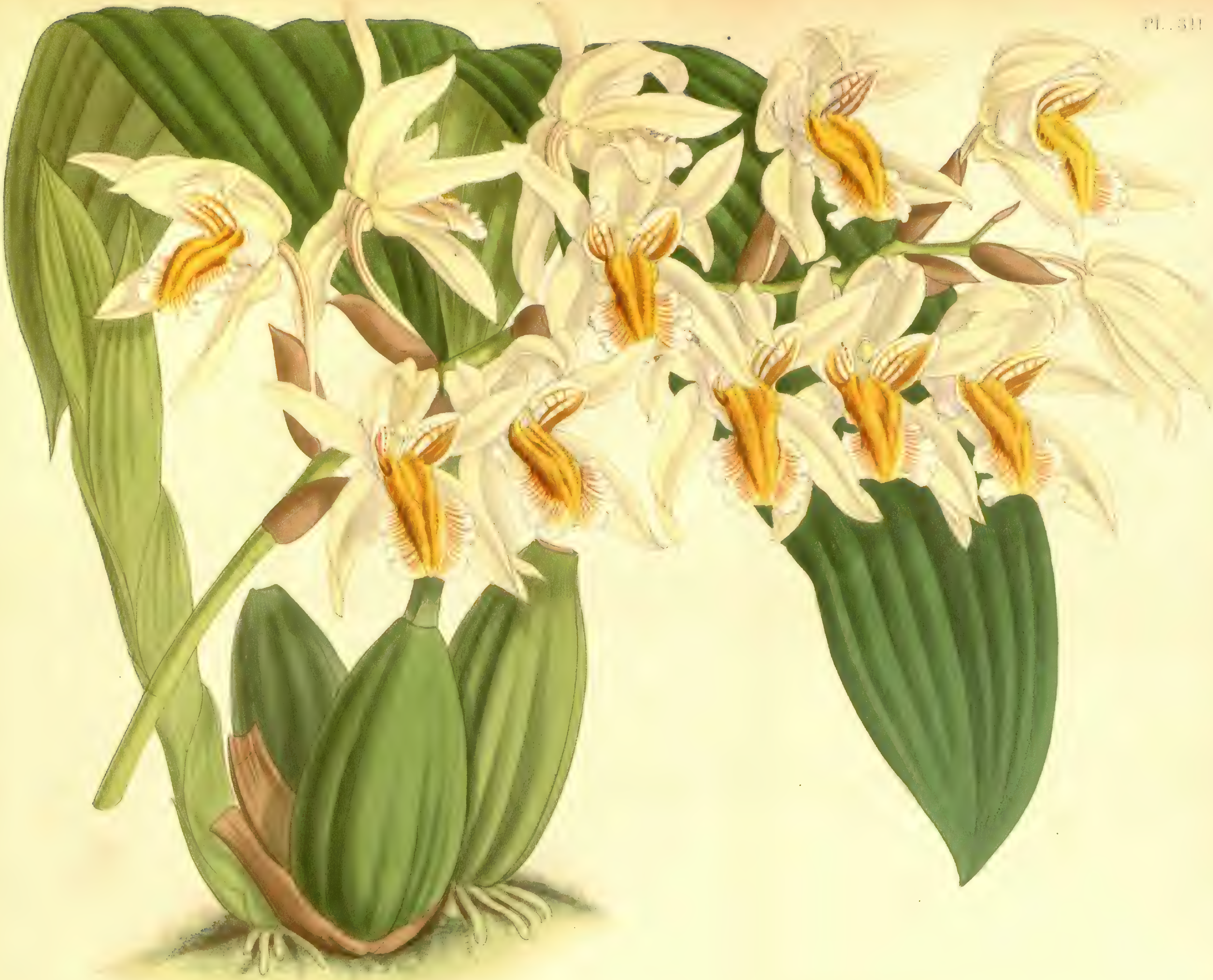
Our artist was kindly permitted to make his drawing of this variety from a well-grown plant in the collection of Reginald Young, Esq., Fringilla, Linnet Lane, Ullet Road, Liverpool, in whose collection are many fine specimens of various Orchids, which are under the careful management of Mr. Poyntz, the gardener.

Cattleya Eldorado splendens is an evergreen variety, and resembles the typical plant in its growth. Its short clavate stems are about six inches high, and terminate with a solitary, ligulate, deep green leaf; the scape issues from between a long narrow sheath on the top of the pseudobulb, and bears three large flowers; the sepals and petals are of a clear rose colour; the lip is large, having a rich, deep orange-coloured throat, succeeded by a circle of white, followed by a belt of rich violet-purple, which extends to the front and round the margins. The colours in this variety are beautifully contrasted and blended, and produce an effect altogether different and superior to that of the original form. It blooms during the months of September and October, and its flowers continue in perfection for three or four weeks.

As before remarked, this Cattleya is found in the low-lying regions near the Rio Negro, in Brazil, where the temperature is high, and, consequently, in our treatment of this plant we place it at the warmest part of the Cattleya house. Some of the plants we cultivate in teak wood baskets suspended from the roof; others we have grown in pots, and they appear to thrive equally well in both positions. There is no doubt that, in order to flower them well, they require good exposure to light. We use rough fibrous peat and sphagnum moss for potting; but although all Cattleyas thrive in this material, we do not advocate the use of a great quantity of it about their roots; the system of potting should be the same as we have previously advised for *C. Mossiæ* and others, and the drainage must always be kept free.

STAND HALL, WHITEFIELD, MANCHESTER.—In November last, we visited the above-named place, the residence of Thomas Statter, Esq., in order to see the collection of Orchids which has been gathered together at this establishment, and it was a great source of gratification to see plants so well grown and cared for. Odontoglossoms were represented by a fine lot of *O. Alexandræ* and *O. Pescatorei,* and, indeed, nearly all the leading kinds are to be found in this collection in vigorous health; the fine robust growths they are now making will doubtless, in the coming year, produce hundreds of spikes of bloom, whilst even at the time of our visit, there were some very good forms already expanded. In another house we observed some fine plants of Cattleya and Lælia, such kinds as *C. Mendelii, C. Mossiæ, Lælia purpurata* (many fine specimens), and *L. elegans* being conspicuous. East Indian Orchids were represented by a well-grown lot of Dendrobiums, and by several plants of *Vanda cœrulea* and of many other genera. The plants of *Vanda cœrulea* were exceptionally fine, bearing seven spikes of their charming blue flowers; this species is undoubtedly one of the most chaste of the forms which have yet been introduced to cultivation. Associated with the blue Vandas was the superb *Cattleya Dowiana aurea,* with its showy yellow and crimson-purple flowers; and also plants of *Oncidium Jonesianum,* bearing some good spikes, its showy white and spotted flowers rendering it very effective; *Cypripedium Spicerianum* was showing twenty spikes.

(Continued under Plate 311.)



COELOGYNE ASPERATA

CŒLOGYNE ASPERATA.

[PLATE 311.]

Native of Borneo.

Terrestrial. *Pseudobulbs* large, stout, from six to eight inches high, oblong, dull green, becoming corrugated with age, and surmounted by a pair of stalked lanceolate, plicate, dull green leaves about two feet in height. The *raceme* is about a foot long, pendulous, bearing from twelve to fifteen flowers, and furnished with roundish-ovate, concave, membraneous bracts. *Flowers* some three inches in diameter, and arranged in a distichous manner; *sepals* lanceolate, carinate, pale cream colour; *petals* similar in colour, but narrower; *lip* creamy yellow, three-lobed, lateral lobes erect, ovate-obtuse, middle lobe oblong-obtuse, crisp on the edge and ornamented with a warty ridge or crest on the disc, where it is rich orange-colour, and from which radiate numerous streaks and veins of bright chocolate and yellow. *Column* stout, somewhat triangular, cream colour.

CŒLOGYNE ASPERATA, *Lindley, in Journal of the Horticultural Society,* iv., p. 221; *Id., Folia Orchidacea, Art. Cœlogyne,* No. 6; *Pescatorea,* t. 7; *Williams, Orchid-Growers' Manual,* 6 ed., p. 216.

CŒLOGYNE LOWII, *Paxton's Magazine of Botany,* 1849, xvi., p. 225.

This fine member of the genus Cœlogyne was first introduced to this country in the year 1845 by the Messrs. Low & Co., of Clapton, who distributed it under the name of *C. Lowii.* It is a native of Borneo, and is found growing wild in that island on low marshy grounds in the neighbourhood of the Sarawak River. It is both a showy and beautiful species—in fact, one of the very best, when well grown—its fine foliage and dense arching spikes of bloom rendering it extremely useful for public exhibition purposes; and some years ago many fine specimens were wont to be seen, making a grand display, at the Royal Horticultural Society's gatherings in London. The very finest plant of *C. asperata* that we ever saw was a specimen grown by Mr. Pilcher, when gardener to T. Twisden Hodges, Esq., previous to his taking charge of the collection of Orchids formed by the late Sigismund Rucker, Esq., at Wandsworth; but, of late years, one seldom sees this species, either in large or small plants, from which we infer that it must be very rare in its native habitat; and as the Messrs. Low must be well acquainted with the exact locality whence it was derived, they would confer a great benefit upon the Orchid world were they to import some more of it, in order that the present generation of Orchid growers might be enabled to produce grand specimens similar to those which formerly graced our plant-houses.

Cœlogyne asperata is a noble evergreen plant, which, when well grown, attains a height of two or more feet; its pseudobulbs are oblong, from six to eight inches high, bearing upon the summit a pair of stalked, lanceolate, plaited, light green leaves. The raceme is a foot or more long, arching; the flowers, which number from twelve to fifteen, are some two or three inches across, and are arranged on the raceme in a two-ranked fashion; the colour is creamy yellow, the lip being richly marbled with brownish yellow veins, which spring from a rugged, bright deep orange-coloured central ridge. The flowers are produced during June and July, and continue in perfection for two or three weeks, if they are kept from damp. Our present drawing was taken from a plant growing in the fine collection of W. Lee, Esq., Downside, Leatherhead, where many rare species and varieties of Orchids are to be found.

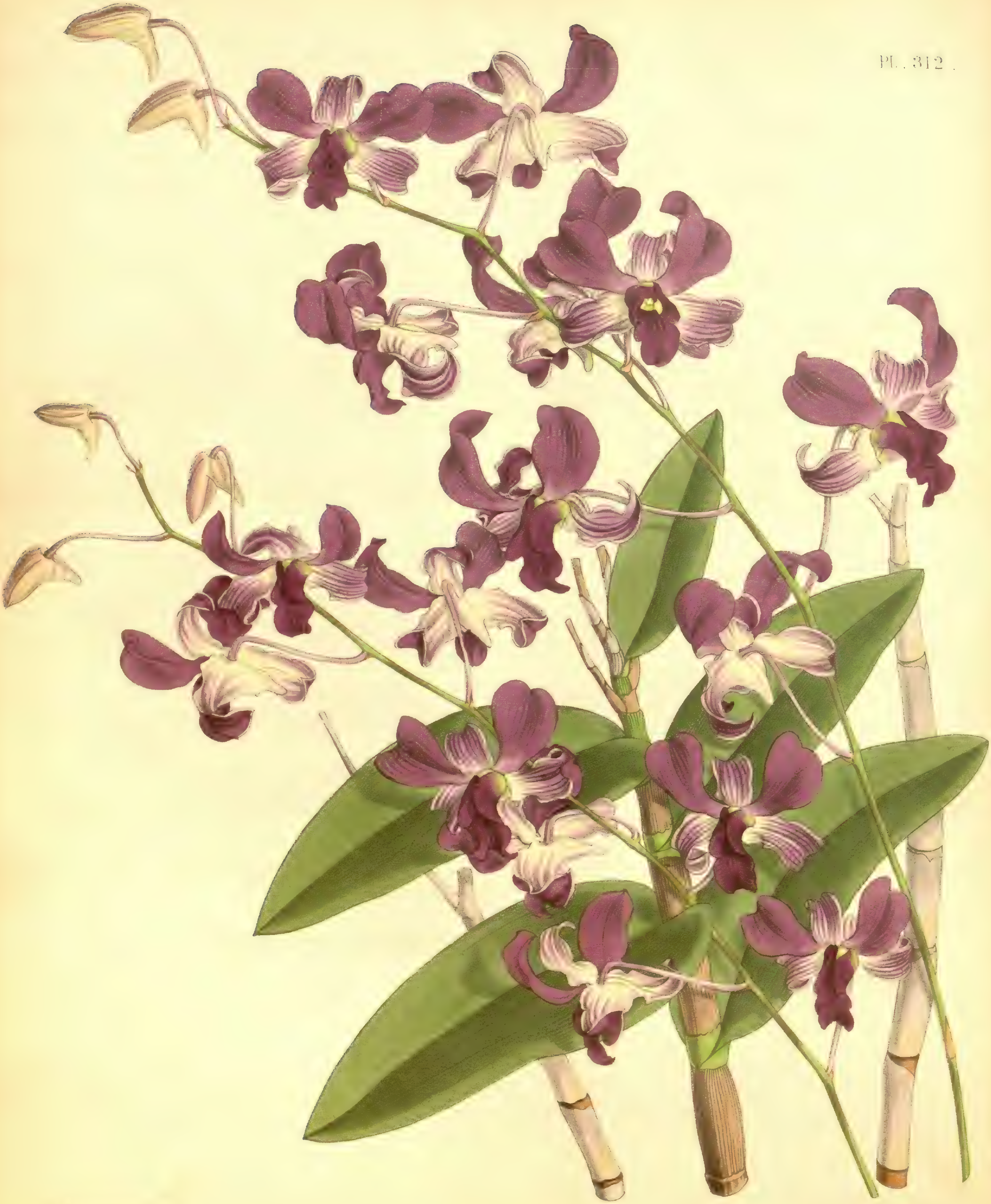
The compost Mr. Woodford (who has charge of the Downside collection) uses for this plant is good fibrous peat and sphagnum moss. The plant is grown in a pot, and the drainage is kept in good open working order, so that nothing stagnant remains about its roots. We have also seen this species grown in a mixture of turfy loam and fibrous peat, and under this treatment it thrives equally well. It is a plant which grows freely, and therefore requires a good-sized pot; it also enjoys a liberal supply of water to its roots during the period of active growth, but after this is completed, the quantity should be gradually diminished, until only just sufficient is given to keep the pseudobulbs plump and healthy. When new growths and roots begin to appear extra water must be given, gradually increasing the quantity with the strength of the roots and shoots. This plant enjoys strong heat, and should be grown at the warmest end of the East India House, well exposed to the light, but shaded from the hottest rays of the sun.

(Concluded from Plate 310.)

The Indian Crocuses (*Pleiones*) were extremely gay, beside which many other beautiful plants contributed their quota to the formation of a grand display, whilst judging from the number of kinds now pushing up their spikes, there is no fear of a scarcity of bloom for a long time to come. This is a very progressive collection, and it bids fair in time to become one of the best in the neighbourhood. Mr. Statter takes a great interest in his Orchids, and he is ably seconded by his gardener, Mr. Johnson.

Since our visit to this collection, we have received from Mr. Statter various cut blooms of Orchids, specially notable amongst which was a fine variety of *Cattleya maxima*, the size and intensity of its colour rendering it one of the best forms that has hitherto come under our notice.—B. S. W.

PL. 312.



J. Nugent Fitch del. et lith.

DENDROBIUM SUPERBIENS.

B. S. Williams Publ^r

DENDROBIUM SUPERBIENS.

[PLATE 312.]

Native of North Australia and Torres Straits.

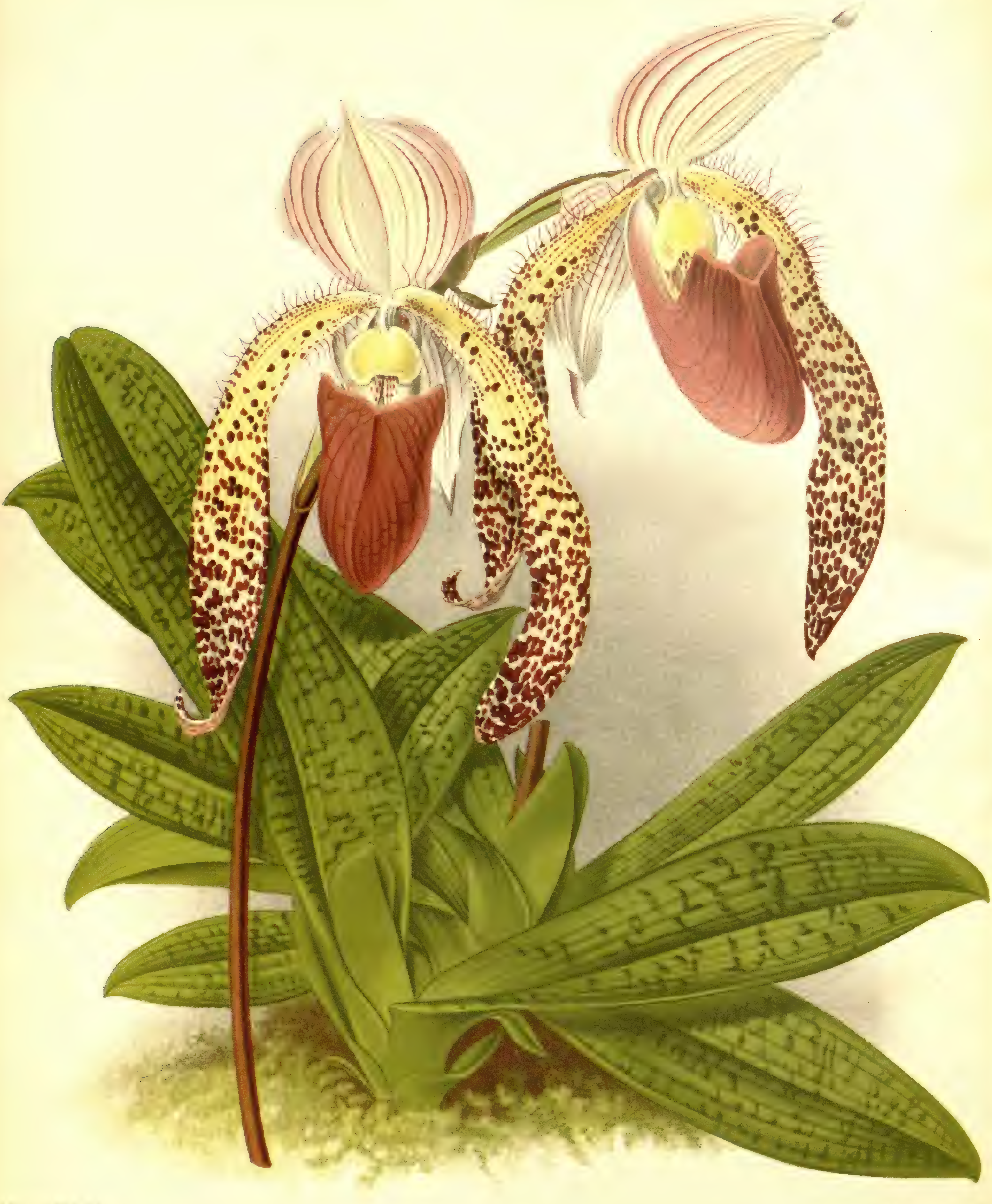
Epiphytal. *Pseudobulbs* stem-like, erect, fusiform, jointed, from one to three feet in height, and about three inches in circumference, when young furnished with leaves from the base upwards, but when mature the lower ones fall off, leaving near the top four or five distichous, oblong-acute sheathing leaves, which are persistent, coriaceous in texture, and deep green. The scapes spring from the apex of the stem, as well as from the axils of the leaves, arching gracefully, and bearing from twelve to twenty-six flowers, which are upwards of two-and-a-half inches across, arranged in a distichous manner, and of a very pleasing shade of warm rosy purple. *Sepals* about an inch long, ligulate-acute reflexed, produced behind into a short conical spur, the dorsal one being quite sessile, whitish on the outside, the inside being rich rosy purple, having reticulated veins of a deeper shade of the same hue, narrowly bordered with white; *petals* cuneate-oblong, or rhomboid, reflexed, much broader and longer than the sepals, and rich deep rosy purple in colour; *lip* three-lobed, side lobes erect, rhomboid, cucullate, same colour as the sepals, middle-lobe somewhat triangular, obtuse, reflexed, and slightly undulate on the margin, deep rosy purple, ornamented on the disc with five elevated ridges, which are fringed in front, and extended quite to the base of the middle-lobe. *Column* short and stout, curved and triangular.

DENDROBIUM SUPERBIENS, *Rchb. fil.*, *Gardeners' Chronicle*, N.S. vi., p. 516; *Id.* N.S. ix., p. 49, fig. 9; *Floral Magazine*, second series, t. 294; *Reichenbachia*, i., t. 39; *Fitzgerald's Australian Orchids*, ii., part I. 1884; *Williams, Orchid-Grower's Manual*, 6 ed., p. 301.

We here wish to bring to the notice of our subscribers and Orchid growers generally one of the most distinct-coloured species of all the Dendrobia. It was discovered and sent home by our collector, Mr. Goldie, in the year 1877, from Torres Straits, on which abut the northern extremity of Australia and the southern shore of the island of New Guinea. It is also reported to have been found by Captain Broomfield on the islands known as the Prince of Wales' Group, situated some twenty miles from the mainland of Queensland, and about fifty miles from the New Guinea coast, and also on the mainland of North Australia. At that time we imported a large quantity of plants of this species, of which many flowered the same year; and as a proof of its profuseness, we are enabled to say that from that time until now we have never been without some of its flowers in our Orchid houses. *D. superbiens* would appear to be a most free-blooming plant in its native country, for we observed, when the first importation was received by us, some of the old plants bearing as many as fifteen spikes on one stem; and even after having been imported some years the old bulbs are still pushing out fresh spikes, in fact the old pseudobulbs of this species seem to be perpetual bloomers: this, combined with the long time its flowers last in perfection, renders it an extremely valuable plant for all decorative purposes. There is, however, a spurious and shy-flowering form of this plant which is not worth the space it occupies.

The accompanying illustration was taken from a fine specimen in the grand collection of M. le Duc de Massa, Chateau de Francouville, par Luzarches, France, where it bloomed this year. At this fine place a grand collection of plants is being formed, and special houses are devoted to each section of Orchids as well as other plants. The collection of Vandas is especially large, and it comprises numerous rare species and varieties. The Duc de Massa is most desirous to obtain as complete a collection as possible of this noble class of distichous-leaved Orchids, and his gardener, Mr. H. Talluè is equally interested in the work.

Dendrobium superbiens is a splendid erect-growing species, the stems upon well-grown specimens attaining a height of from two to three feet, and from two to three inches in circumference, bearing thick oblong-acute dark green foliage; the flower spikes are produced from the top and axils of the pseudobulbs, and these for years continue to produce fresh spikes. The raceme bears from fifteen to twenty-six flowers, which continue in beauty for three months; the colour of the sepals and petals is deep rosy purple, beautifully reticulated with a darker hue, whilst the margins are bordered with white; the lip is of a warm rosy purple, the disc being ornamented with five raised lines or keels. Its flowers are produced at all seasons of the year, and in many instances on plants only six inches high; and if a number of plants are grown, some flowers will be expanded the whole year round. This Dendrobium is a plant of easy culture, and one that continues to improve, and lasts for many years provided it is subjected to a high temperature and moist atmosphere. We grow it in a small span-roofed house, in which there is a central walk, and tables on either side, upon which young plants of Crotons are grown; the large plants of the Dendrobes are placed on the stages with the Crotons, and the small plants are suspended from the roof; and under these conditions Dendrobiums and Crotons flourish admirably. We use small pans for this Dendrobe, the compost being simply peat and sphagnum moss; a liberal supply of water to their roots is absolutely necessary, and therefore thorough drainage is of the highest importance. During summer we syringe them twice daily, and they are never shaded. In autumn and winter they are kept rather moist, as at this season some are flowering and others finishing their growths. Temperature at night during winter ranges from about 60° to 65°, and in summer from 65° to 70°; the sun will cause the temperature to rise occasionally to 80° or more on warm days, but this is not injurious to the plants if the houses are properly ventilated, and the atmosphere is well charged with moisture.



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CYPRIPEDIUM MORGANIÆ

CYPRIPEDIUM MORGANIÆ.

[PLATE 313.]

Garden Hybrid.

A terrestrial plant, bearing distichous, ligulate, obtuse leaves, which are from nine to twelve inches long, and about two and a half inches wide, leathery in texture and deep shining green in colour, faintly tessellated with darker green. *Scape* radical, terete, erect, purplish brown, slightly hirsute, about eighteen inches high, bearing from three to four very large flowers; *bracts* large, ovate-acute, streaked with purple; *dorsal sepal* broadly oblong or elliptic, about two and a half inches long, and an inch and three-quarters broad, white within, suffused with delicate rose colour, and ornamented with eight to ten longitudinal reddish purple streaks, the two lateral combined sepals being smaller, and similarly though less highly coloured; *petals* ligulate, acute, about five inches long and three quarters of an inch broad, curved downwards, slightly undulate, and ciliated on the margin, white, tinged with sulphur-yellow, and heavily spotted with brownish purple, especially so towards the apex; *lip* nearly as in *C. superbiens,* but bolder, unguiculate, standing forward horizontally, above rose colour veined with brownish purple, whitish beneath; *staminode* pale yellow, somewhat lunate, with incurved cusps and a deep sinus at the back.

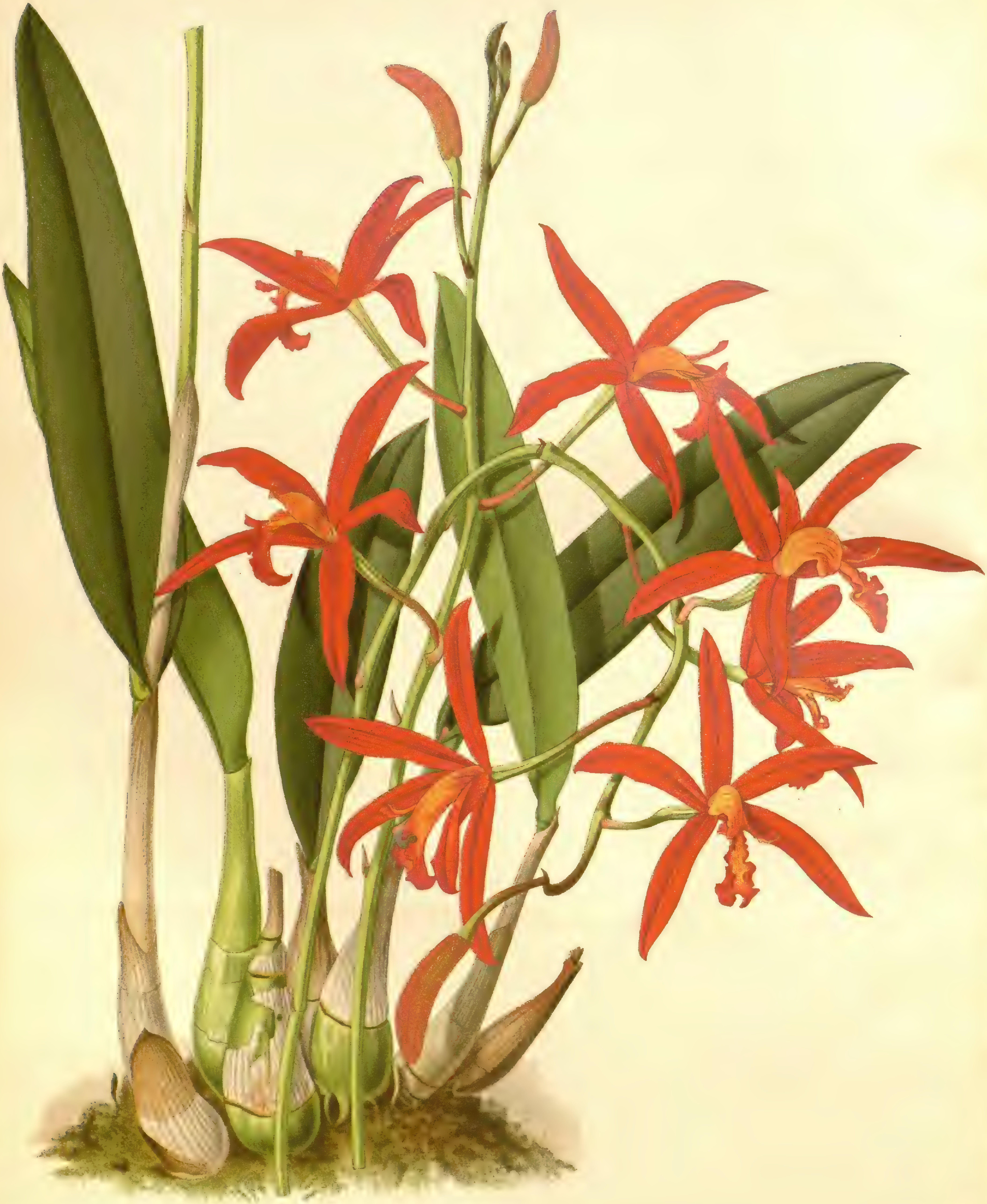
CYPRIPEDIUM MORGANIÆ, *Rchb. fil.*, *Gardeners' Chronicle,* 1886, xxvi., p. 243; *L'Illustration Horticole,* fifth series, 1887, t. 5; *Garden,* 1883, xxiii., p. 58, t. 372; *Williams, Orchid-Grower's Manual,* 6 ed., p. 251.

Many hybrid Cypripediums have been raised in this country during the last twenty years, and the named kinds have now become very numerous; the subject of our present plate, however, we think cannot fail to enchant all lovers of these "Slipper Orchids." We consider this the grandest hybrid that has yet been raised. It is the result of carefully selecting two good parents, and when this is done the cross is almost sure to be a successful one; in this case the parents chosen were *C. superbiens* and *C. Stonei*, the former belonging to the *barbatum* section, and the latter to the long-petalled, glossy-leaved Eastern species which resemble the Western *Selenipediums* in everything, but wanting the three-celled ovary. *C. Morganiæ* appears to resemble its first-named parent more closely in the flower, and the latter in its foliage, although the beauties of both may be said to be fairly blended. This splendid hybrid was raised by Mr. Seden, in Messrs. J. Veitch & Sons' Nurseries at Chelsea, and is named in honour of the late Mrs. M. Morgan, of New York, U.S.A., who was a great admirer of Orchids, and one of the most liberal and enthusiastic purchasers of her day. Within the last few years the taste for Cypripediums has become almost universal, for these plants, in addition to the extreme beauty of their flowers, are easy of cultivation, very free blooming, and their flowers remain for a long time in perfection. Our drawing was taken from a grand specimen in the collection of W. Lee, Esq., Downside, Leatherhead (which has since come into our own possession), where a splendid collection of this genus is maintained.

Cypripedium Morganiæ is a fine evergreen plant with tessellated leaves from nine to twelve inches long. The scape is terminal, erect, and attains a height of twelve or eighteen inches, bearing from three to four large flowers, which much resemble those of the rare *C. Stonei platytænium*, whilst the scape itself is more like that of *C. Stonei*. The dorsal sepal is elliptic, white tinged with rose colour, and veined with reddish purple; petals ligulate, sulphurous white, with numerous dark brownish purple spots and blotches on the inside; lip similar to that of *C. superbiens*, but longer, brownish purple above, yellowish white below. During the past year (1887) we flowered four plants of *C. Morganiæ*, at different times, in the Victoria and Paradise Nurseries; the first plant commenced to bloom in July, the flowers of each plant continuing in full beauty for two months, which affords ample proof of its perpetual-blooming properties, and the length of time its beauties may be enjoyed. This Cypripedium is of free habit of growth, and when the plant becomes strong and thoroughly established, it produces lateral growths very freely; but, being a hybrid, its numbers cannot be augmented by importation from abroad; it is, consequently, likely to remain a rare plant for many years to come. We find this variety requires the same treatment as *C. superbiens*—thriving best in the East India House; it enjoys a liberal supply of moisture to its roots during active growth, and, indeed, during the whole year, in order to keep the foliage plump and vigorous; in the summer time a slight syringing daily will be found highly beneficial, but avoid heavy syringing, as the water is liable to lie in the axils of the leaves and injure the young growths. These plants do not form pseudobulbs, and consequently they have nothing to support them during the resting season; if they are subjected to drought at that time, therefore, a moderate amount of moisture is necessary in winter to maintain them in a healthy condition. Cypripediums should be grown near the glass in order to obtain all the light possible, so that their growths may become well matured, without which they cannot bloom freely; this ripening of the growths produces stronger spikes and intensifies the colour in the flowers. The material we use in the cultivation of this plant is a mixture of rough fibrous peat, sphagnum moss and potsherds, the pots being well drained, which keeps everything clean and sweet about its roots. The best time for re-potting is just after the flowering season, at which time it commences to make new growths. A thin shade should be used to screen this plant from the sun, but it should never be shaded unless the sun is shining.

Cypripediums are subject to the attacks of red and black thrips, but we find these pests are readily destroyed by steaming with the Thanatophore, the use of which is becoming very general on account of its cleanliness and the safety with which the remedy may be applied.

PL. 314



J. Nugent Fitch del.

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LÆLIA CINNABARINA.

LÆLIA CINNABARINA.

[PLATE 314.]

Native of Brazil.

Epiphytal. *Pseudobulbs* slender, sub-cylindrical, somewhat flask-shaped, swollen at the base and tapering upwards, from six to ten inches high, clothed with sheathing membraneous scales, and bearing on the summit one, sometimes two erect, linear-oblong, acute, rugose, deep green leaves, which are sometimes suffused with a purplish hue. *Scape* issuing from between a long ancipital sheath, terminal, erect, slender, longer than the leaves, racemose and many-flowered; *sepals* and *petals* narrow, spreading, nearly equal, linear-lanceolate and acuminate, fleshy in texture, and of a uniform bright cinnabar-red, or orange-vermilion colour; *lip* three-lobed, the side lobes oblong-acute, convolute over the column, orange colour veined and suffused with red on the inner side, anterior lobe somewhat ovate, recurved and crispate, with three elevated lines on the disc. *Column* short, clavate, and triquete.

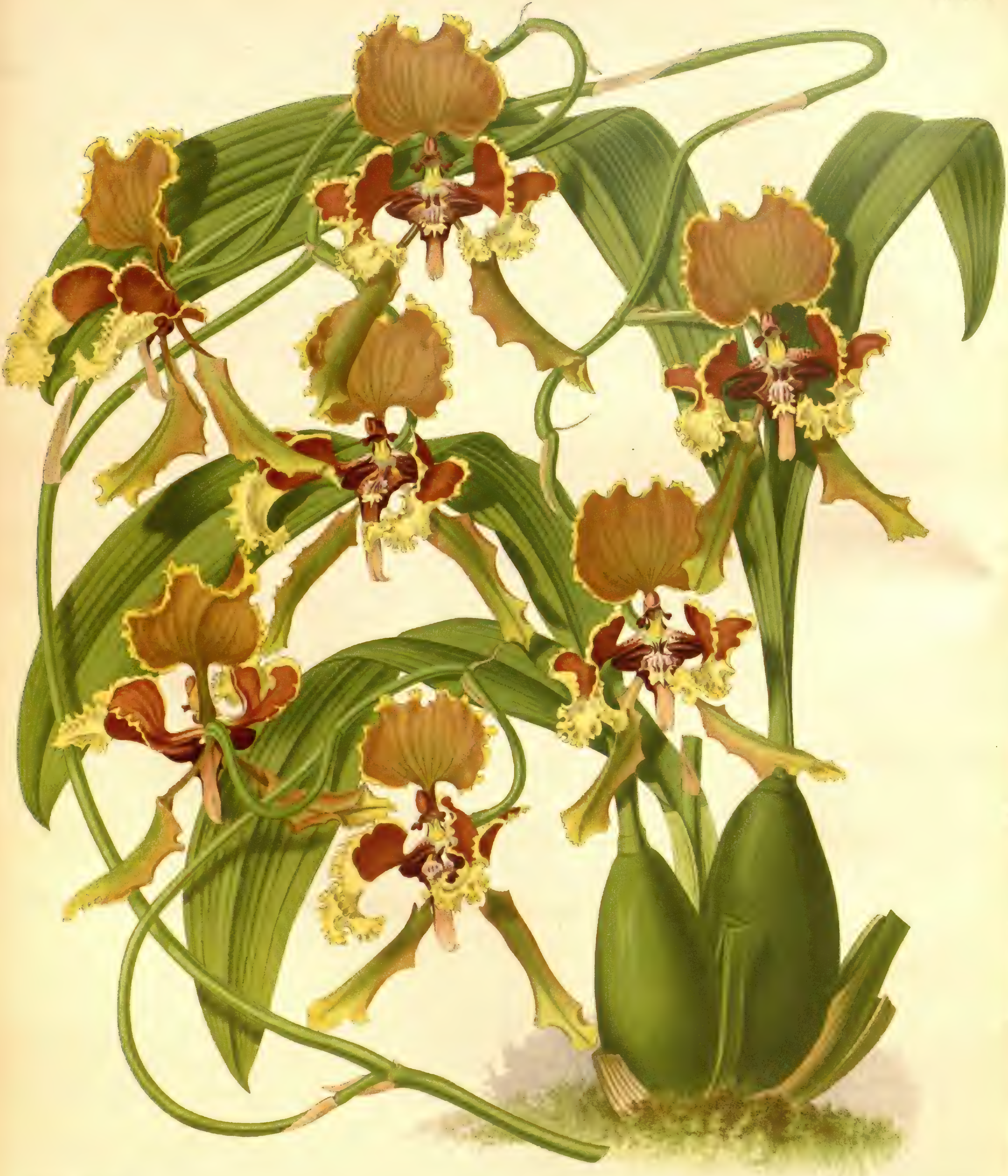
LÆLIA CINNABARINA, *Lindley, Sertum Orchidaceum*, t. 28, 1838; *Botanical Magazine*, t. 4302; *Paxton's Magazine of Botany*, vii., p. 193, with tab.; *Regel's Gartenflora*, 1867, t. 559; *Williams, Orchid-Grower's Manual*, 6 ed., p. 354.
BLETIA CINNABARINA, *Reichenbach fil., Xenia Orchidacea*, ii., p. 61.

In previous numbers of this work we have already figured several beautiful species and varieties of Lælias bearing large flowers, such as *L. autumnalis atro-rubens*, *L. elegans*, *L. purpurata Williamsii*, *L. crispa Buchananiana*, *L. anceps*, &c., &c. The species whose portrait we now lay before our readers is, however, a somewhat small-flowered but charming kind, which, on account of the brilliancy of its flowers, is highly appreciated by all those who admire bright colours. Other species similar to and nearly allied to *L. cinnabarina* are *L. harpophylla* (the sword-leaved Lælia), and the yellow-flowered *L. flava;* the former, although a beautiful kind, does not, however, produce such a fine spike of bloom, whilst the latter, which is figured in our fifth volume, plate 220, produces flowers similar in shape, but they are of a light orange-yellow colour.

Lælia cinnabarina is an old inhabitant of our plant stoves, having been introduced in the year 1836 from the provinces of Minas Geraes and Rio Janeiro, in Brazil, where it is said to grow wild upon rocks, amongst other herbage, at considerable elevations (2,500 to 3,500 feet). It was first exhibited in bloom in this country, in the year 1837, at the Royal Horticultural Society's meeting, held in their Regent Street Rooms, by the late Mr. Young, of the then celebrated Epsom Nurseries. Our drawing was taken from a fine specimen grown in the Victoria and Paradise Nurseries, Upper Holloway.

This species is a fine compact-growing evergreen plant; the pseudobulbs are stem-like, elongated, sub-cylindrical, but broadest at the base, clothed with sheathing scales, and bearing leathery, dark green leaves on the top. The spikes proceed from the apex of the bulbs, and are about two feet in length, bearing several flowers of an orange-vermilion colour; these continue in beauty for several weeks during April and May. This Lælia requires to be grown in the Cattleya house, and in a position that will afford it all the light possible; very little shade is necessary, except just during the hottest part of the day in summer. It thrives equally well either in a pot or a basket, but requires a liberal supply of water in the growing season, which commences soon after the flowers have faded. If the plants require shifting, just as the flowers begin to lose their beauty is the best time to re-pot or re-surface them; this operation must be carefully carried out, avoiding the breakage or bruising of roots. The compost should consist of rough fibrous peat and a little sphagnum moss, whilst drainage must be of the best; after growth is mature reduce the water supply, but not to such an extent as to cause the plant to show signs of distress. This Lælia, conjointly with the majority of Brazilian plants, is peculiarly subject to a white mealy scale, which, however, may be eradicated by washing whenever it makes its appearance; but if neglected the plants become permanently disfigured, therefore we cannot too strongly urge upon cultivators the necessity of at once destroying any insect enemies the moment they make their appearance.

NEW HYBRID CALANTHES. — The most interesting feature of the meeting of the Royal Horticultural Society, held at Kensington on the 17th of December, 1887, was the magnificent group of hybrid Calanthes, exhibited by Sir Trevor Lawrence, Bart., M.P., Burford Lodge, Dorking. There were several superb forms of these useful decorative plants, the most notable being *C. sanguinaria*, which was selected to receive a First Class Certificate. The sepals and petals of this form are intense deep crimson, becoming slightly paler towards the tips; the lip is large, very deep crimson, increasing in density of colour in the eye. Next in beauty came *C. Burfordiensis*, in which the flowers are deep rosy crimson, flushed with purple; in *C. dubia* the flowers are soft rose-colour, and *C. amabilis* has the sepals and petals rose-colour, whilst the lip is pink, with a pale yellow eye; *C. lactea* is a white form of *C. Veitchii*, but not quite pure, as the lip is stained with sulphur-yellow. Two other forms were also worthy of notice, although we have seen them before, *i.e.*, *C. porphyrea* and *C. Veitchii splendens*, the latter a very rich-coloured and pleasing flower, approaching to the form named *C. Sandhurstiana*. Besides the above there were several pretty variations of the *C. vestita* section, such as *C. vestita nivea*, in which the base of the white lip is stained with pale yellow; *C. rubro-oculata nova*, in which the flowers are ivory-white, with a very deep crimson lip, and various others. All these forms are great acquisitions to our winter-blooming Orchids, the brightness of their flowers, which are borne upon long and gracefully arched spikes, rendering them very effective.—B. S. W.



J. Nugent Fitch del.

B. S. Williams Publ^{r}

ONCIDIUM LAMELLIGERUM

ONCIDIUM LAMELLIGERUM.

[PLATE 315.]

Native of Ecuador.

Epiphytal. *Pseudobulbs* stout, ovoid, or flask-shaped, six inches high, smooth when young, and deep green, becoming wrinkled with age. *Leaves* eighteen inches to two feet long, and two and a half inches broad, lanceolate-acuminate, coriaceous, and bright green. *Scape* axillary, climbing, much branched, and many-flowered. *Flowers* upwards of three inches in diameter; *sepals* and *petals* clawed, the claws about one-third the length of the blade; *dorsal sepal* reniform, more than an inch wide, undulated, deep brown, narrowly bordered with yellow; *lateral sepals* oblong, divergent, two inches long, semi-hastate on the superior edge, at the base, and cuneate on the lower edge; *petals* broad, but shorter than the lateral sepals, oblong-obtuse, becoming suddenly hastate, undulated, rich brown at base, apical half clear yellow; *lip* very small, trifid, with two projecting serrated lamellæ, the lateral lobes triangular, deep rich purple, middle lobe linear, dull white, with a white fleshy crest towards the base.

ONCIDIUM LAMELLIGERUM, *Reichenbach fil.*; *Gardeners' Chronicle*, New Series, vi., p. 808; *Id.* New Series, x., p. 684; *Williams, Orchid-Grower's Manual,* 6 ed., p. 487.

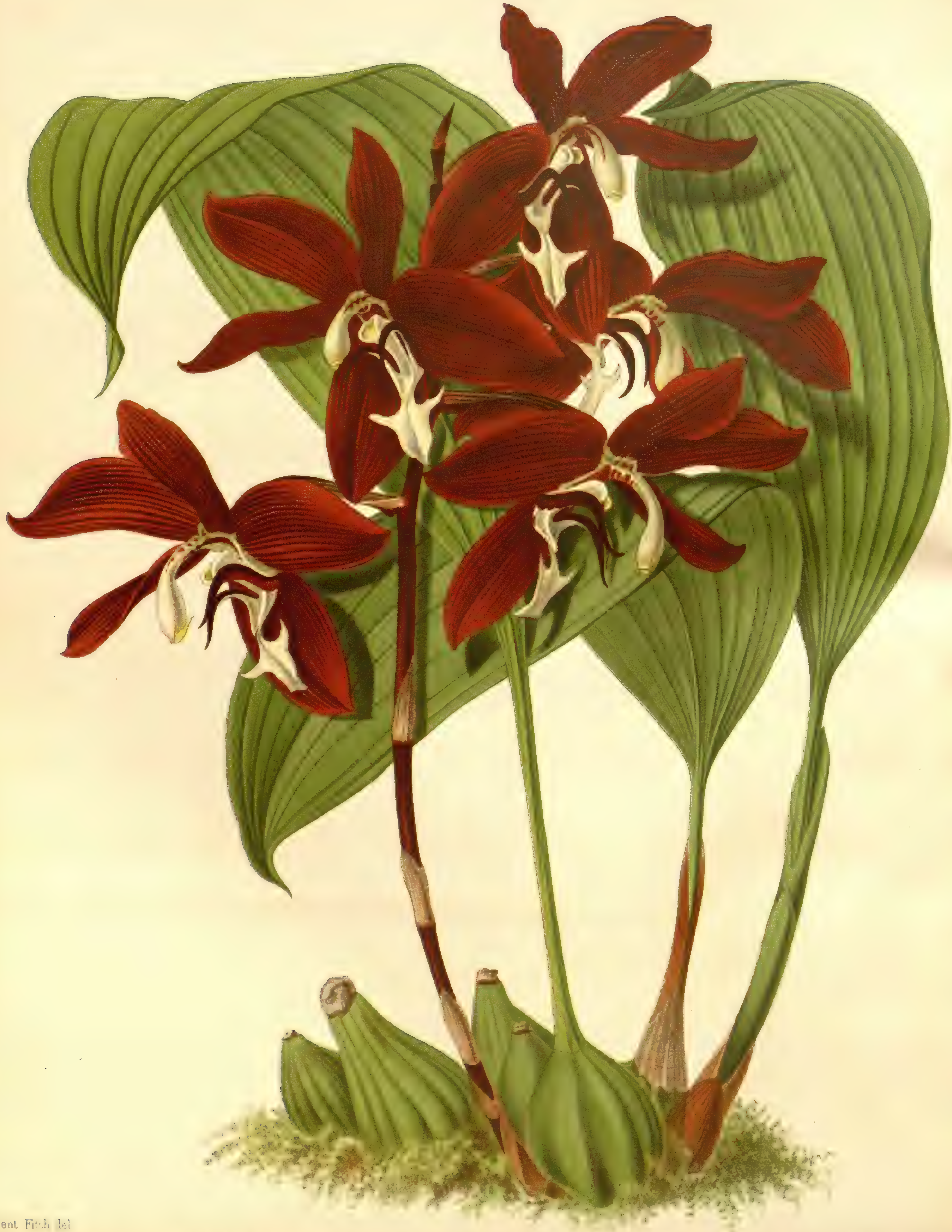
This rare and handsome Oncidium belongs to the section *Microchila,* of Lindley; it is a very distinct plant, but yet it somewhat resembles *Oncidium macranthum.* By some it is supposed to be a natural hybrid, and if such is the case we should imagine the parents to have been *O. macrathum* and *O. serratum,* which are two distinct plants, and which we believe grow wild in the vicinity of each other. The plant now under consideration possesses the colours of both the above-named species; the habit of growth is the same, and it also produces similar long-branched flower-spikes. We first saw this Oncidium in the fine collection of C. Dorman, Esq., Sydenham, some few years ago. It was a large specimen, and in full bloom at the time. Within the last few years several species of Oncidium belonging to this section have been introduced from the United States of Columbia, such as *O. zebrinum, O. superbiens, O. macropus, O. æmulum, O. undulatum,* &c. Some of them are very beautiful, but differing in their style of beauty from those species which are of Brazilian origin. These latter plants are principally indebted to the colouring of the lip for their beauty, the sepals and petals being usually small and dull-coloured, but in the species belonging to the *Mirochila* section, the sepals and petals play the most important part in the display, the lip possessing little or no beauty, as well as being inferior in size; this is well exemplified in the figure of *O. superbiens* in our sixth volume, plate 276, a very beautiful species, and somewhat similar to the one we here illustrate. Our drawing was taken by Mr. J. N. Fitch—who has made a faithful representation of the plant—through the kindness of R. H. Measures, Esq., Woodlands, Streatham, in whose well-known collection it bloomed during the early part of last year. The plant bore a very fine raceme of flowers, of which our plate, however, only represents a portion.

Oncidium lamelligerum is an evergreen species, with dark green pseudobulbs, the foliage being upwards of a foot long and deep green in colour. The spike is produced from the axils of the leaves from the base of the bulb, and is much branched ; it appears after growth is completed, and is a very long time attaining its full development and bringing forth its flowers, which are large and numerous. The dorsal sepal is uniform, waved at the edge, stalked, and deep brown, bordered with yellow the inferior sepals much longer than the superior one, stalked, and oblong, the base cuneate on the one side, and semi-hastate on the other ; the crispy petals are suddenly hastate, oblong-obtuse, and undulate, pale yellow, blotched with brown towards the base ; lip similar in form to that of *O. macranthum.* Its blossoms expand during the month of May and June, and they continue in perfection for several weeks.

This Oncidium grows upon the branches of the forest trees in its native country, affecting situations which are cool and moist, we therefore place it in the Odontoglossum-house in company with *O. macranthum* and other plants that grow naturally in the same region, in which situation we find it thrive admirably, for although we cannot imitate or produce such an amount of moisture as that which envelopes them at night in their native country, we endeavour to represent the natural surroundings as near as the means at our disposal will allow ; thus they are kept cool and moist, and as much air is admitted, both by day and night, as the condition of the outside temperature will permit. This plant requires very little fire-heat ; indeed, the cultural instructions, which we have so frequently given in connection with *Odontoglossum Alexandræ* and its varieties, will suit it exactly.

Oncidiums of this section, when once established, dislike having their roots disturbed, and these being thick and fleshy are very liable to injury unless great care is exercised in removing old soil, and renewing it. Like the Odontoglossums, this plant requires shading during the summer ; indeed, this is the chief secret in maintaining the leaves in their rich deep green colour.

PL.316



J. Nugent Fitch del

HOULETTIA ODORATISSIMA ANTIOQUIENSIS

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HOULLETIA ODORATISSIMA ANTIOQUIENSIS.

[PLATE 316.]

Native of the United States of Columbia.

Sub-Terrestrial. *Pseudobulbs* tufted, ovoid, stout, some three inches high, deep green, smooth when young, and enveloped in large brownish sheathing bracts, which soon die away—with age they become much furrowed. *Leaves* petiolate, solitary, broadly lanceolate, acute, plicate, and deep green. *Scape* springing from near the base of the pseudobulb, stout, erect, six to ten-flowered, individual flowers large and richly coloured. *Bracts* linear-oblong, acuminate, deciduous; *perianth* spreading. *Sepals* oblong-obtuse, concave, rich chestnut-brown within, dull brown on the outside; *petals* much smaller than the sepals, linear-oblong and acute, rich chestnut-brown on both surfaces; *lip* shorter than the sepals, jointed at the middle; *epichyle* somewhat sagittate, the posterior angles produced into short conical horns, colour white tinged with pale lemon-yellow; *hypochile* similarly coloured, the sides produced backwards into long slender recurved horns. *Column* stout, falcate, white tinged with pale yellow, and blotched with chestnut-brown on the back.

HOULLETIA ODORATISSIMA, *Linden, Pescatorea*, t. 3; *Gardeners' Chronicle*, 1885, xxiv., p. 777, fig. 173.

HOULLETIA ODORATISSIMA ANTIOQUIENSIS, *Linden, L'Illustration Horticole*, 1870, xvii., t. 12; *Williams, Orchid-Grower's Manual*, 6 ed., p. 343.

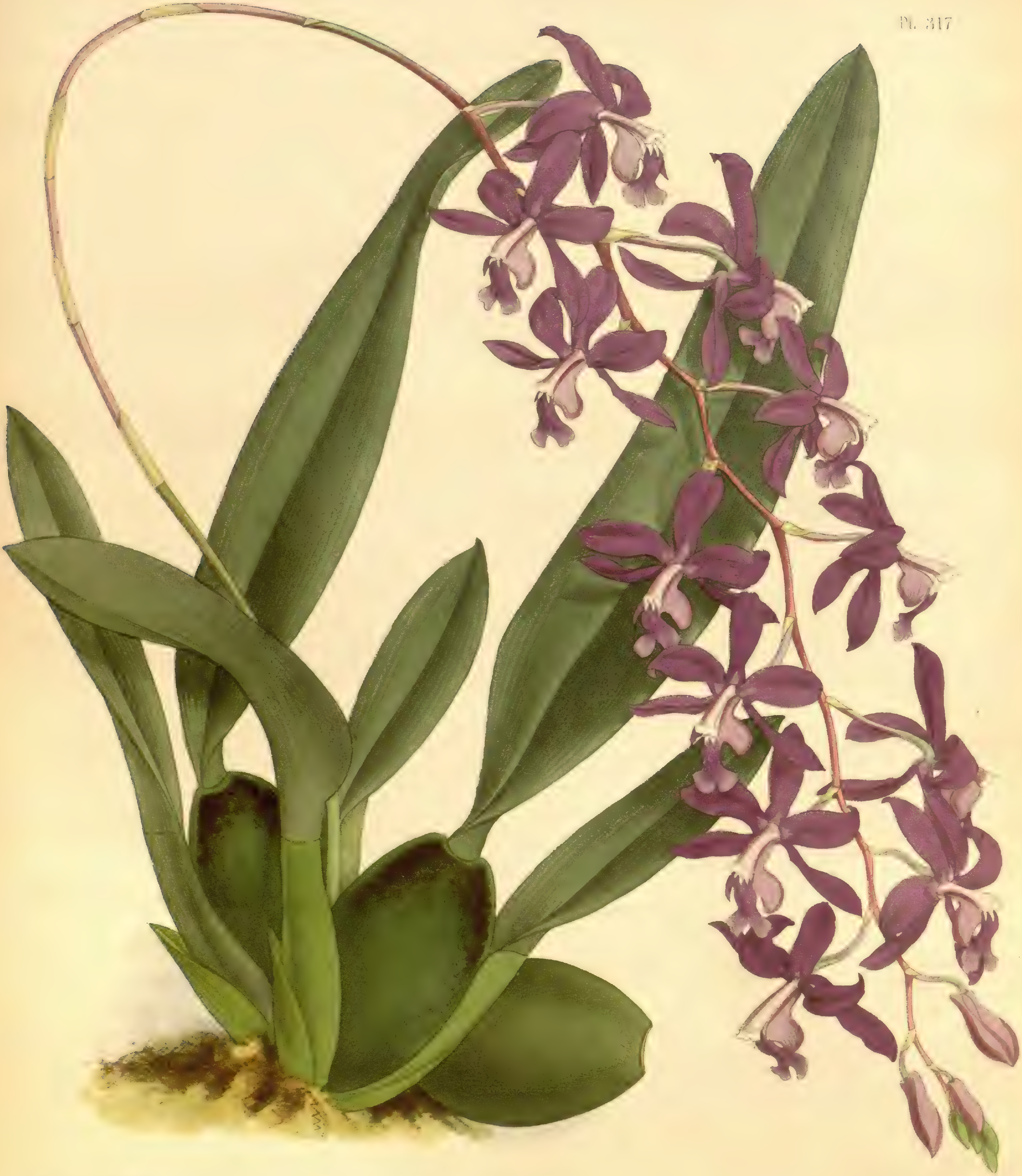
The genus Houlletia was so named in honour of M. Houllet, *jardinier-chef des Serres au Museum de Paris*, and the companion of Guillemin during his botanical researches in Brazil. The plant discovered by Guillemin, upon which the genus was founded, did not, however, receive any specific name, but it is supposed to be identical with a plant discovered by Gardner, on the Organ Mountains, and to which Lindley gave the name of *H. Brocklehurstiana*.

Houlletia belongs to the tribe *Vandeæ*, and would appear to be nearly allied to the genus Stanhopea; as far as we know the genus is a small one, some eight or nine species and varieties only having been introduced to cultivation up to the present time, all of which, saving *H. Brocklehurstiana*, being natives of the United States of Columbia. They are all remarkable for their large, handsome, nodding flowers, and the one we here illustrate particularly so, being far superior in the beauty of its blooms to the typical plant *(H. odoratissima)*. This variety was first discovered and sent home by Mr. Gustav Wallis, in the year 1868, from the province of Antioquia, U.S. of Columbia, during a collecting expedition for M. Linden, of Brussels, by whom the plant was first flowered and named. This fine plant remained scarce for some few years; but now, thanks to the energy of various collectors, numerous consignments have from time to time come to hand, which have been established, and now enrich our stoves. This plant thrives best in a low temperature, and on that account becomes more valuable to amateur growers; it is also very free flowering, and its beautiful and curious flowers are deliciously fragrant. Our drawing was taken from a plant which bloomed with us last year in the Victoria and Paradise Nurseries, Upper Holloway, and which was admired by all those who saw it.

Houlletia odoratissima Antioquiensis is a semi-terrestrial Orchid, with ovate ribbed pseudobulbs, and foliage of a rich dark green colour. The scape is erect and grows a foot high, bearing many flowers of a large size; the sepals are much broader than the petals, but, like them, are rich chestnut-brown in colour; the long lip is curious and fantastic in shape, somewhat sagittate, white, faintly tinged with pale yellow. It blooms during the spring months and continues for some weeks in full beauty.

This Houlletia is free growing, and we find it thrive well in baskets suspended from the roof, where it is well exposed to the light, although it requires to be shaded from the hottest sun in summer. The growing season commences when the flowers are over, and during the formation of new growth a bountiful supply of water is necessary. After the pseudobulbs are mature the plant should be subjected to a period of rest; but during this resting time a little water should be given occasionally in just sufficient quantity to keep the bulbs plump. The bulbs must never be allowed to shrivel, or the plant will rapidly deteriorate, and dwindle away. The material we use for this plant is good rough fibrous peat, from which all the fine particles have been shaken, to this we add some living sphagnum moss, and a few broken potsherds or nodules of charcoal. This material will keep open and free, so that no stagnant moisture remains about the roots; drain well, and do not overload the roots with potting material. Moderate-sized baskets are preferable to large ones, but if desirable this plant may be grown in a pot, taking care that the bases of the pseudobulbs are well elevated above the rim in order to allow of a greater amount of surface room for the roots, and also to allow the water to pass away rapidly from the young growths. We find it grow well in the Odontoglossum house, or in the coolest end of the Cattleya house.

Houlletias are propagated by division of the bulbs, just at the time the plants are starting into growth, leaving about two old pseudobulbs with the leading shoot. These divisions may be potted in the material recommended above; but will require a little extra shade and attention until they become established.



EPIDENDRUM VOLLANUM

MESOSPINIDIUM VULCANICUM.

[PLATE 317.]

Native of Eastern Peru.

Epiphytal. *Pseudobulbs* ovoid, compressed, somewhat two-edged, and deep green, about two inches high, and an inch to an inch and a half broad. *Leaves* oblong, obtuse, carinate beneath, from five to eight inches in length, and about three quarters of an inch to an inch and a half wide, dark green. *Raceme* nodding, unilateral, bearing from ten to twenty flowers, which are nearly two inches across. *Bracts* ovate-lanceolate, thin and membraneous, and about half the length of the ovary; *sepals* and *petals* spreading, narrowly oblong, acute, nearly equal, and all of a bright rosy crimson; *lip* three-lobed, lateral lobes flat, not enclosing the column, rotundate, rosy crimson, faintly stained at the base with yellow, middle lobe larger, emarginate in front, and toothed on the edge, of the same bright rosy crimson hue as the petals, but becoming paler on the disc, which is ornamented with a four-keeled callus. *Column* toothed at the apex, white.

MESOSPINIDIUM VULCANICUM, *Reichenbach fil.*; *Gardeners' Chronicle,* 1872, p. 393; *Botanical Magazine,* t. 6001; *The Garden,* 1882, t. 334; *Williams, Orchid-Grower's Manual,* 6 ed., p. 407.

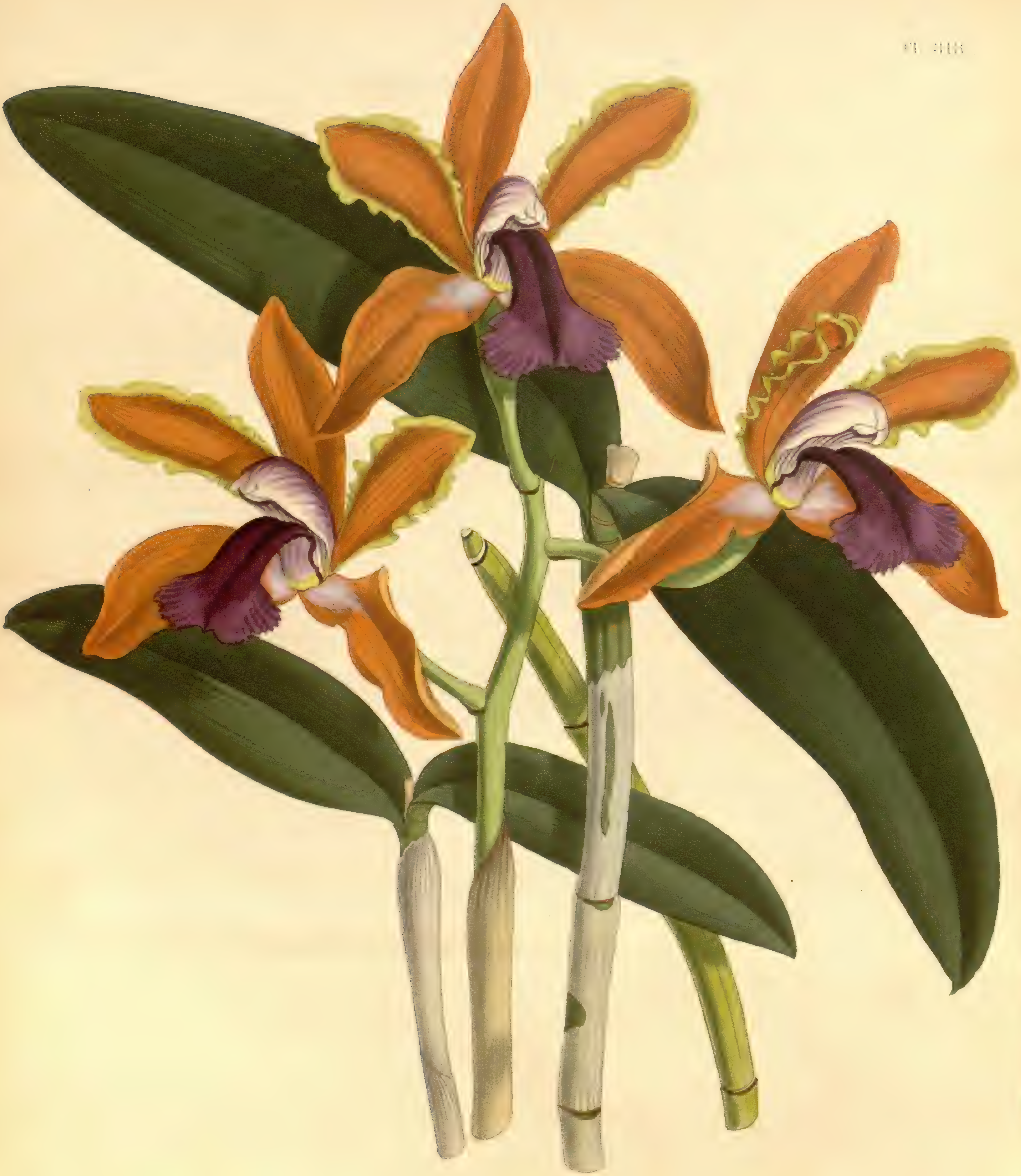
We owe the discovery of this plant to the celebrated traveller, Spruce, who spent so many years in the exploration of the Valley of the Amazon, and whose name is so well known in connection with the introduction of the Quinine or Fever-bark plants (Cinchonas) from Peru into our Indian Territories. *Mesospinidium vulcanicum* was discovered by Spruce on the volcanic mountains of the Tunguragua, a district of the Upper Amazon, about the year 1860, but it was not introduced to this country, in a living state, till some ten or twelve years later; in the interim another species *(M. sanguineum)* had been sent home from the Andes of Peru, and become established in our gardens. This *M. sanguineum*, although a pretty graceful plant, especially when grown in a hanging basket, as in such a position its drooping racemes of flower are seen to the best advantage, is decidedly much inferior to the plant whose portrait we now lay before our readers, a glance at which, will at once convince them of the accuracy of our statement. Our drawing represents the very best form that has hitherto come under our notice; the plant flowered with us, in the Victoria and Paradise Nurseries, for two years in succession; the last season bearing five spikes of flowers, from one of which the present illustration was taken, since that time the plant has passed into the rich collection of R. H. Measures, Esq., of Streatham. We have also noted a very fine form in the collection of D. Tod, Esq., Eastwood Park, Glasgow, where it is grown with the Odontoglossums, and flowers freely every year.

Mesospinidium vulcanicum is a dwarf compact evergreen plant, with bulbs two inches in height, bearing dark green foliage, its flower spikes are produced from the base of the pseudobulbs, and are a foot or more in length, bearing from ten to twenty flowers, which are of a charming bright dark rose colour; the lip is dark rose, margined with a somewhat lighter hue, and the colour is also pale on the disc. Its flowering season in its native country appears to be in the months of April and May, but under cultivation its beautiful blossoms appear during August and September, and continue in beauty for a considerable length of time.

The locality in which this plant grows wild naturally points to its requiring cool treatment under cultivation, which renders it more valuable to those having but limited means, and at the same time being of dwarf habit it occupies but little space. We find it one of the easiest plants to grow, and that it thrives well associated with Odontoglossums, either in pots or hanging-baskets. These must be thoroughly drained. The soil we use is a mixture of rough fibrous peat and live sphagnum moss, but the plant should not be overburdened with soil, although it requires to be made firm. When growing this plant enjoys a liberal supply of water, and, after growth is completed, it must by no means be allowed to suffer from drought, but should be kept sufficiently moist to maintain the bulbs in a plump and healthy condition. The growing season commences just after the flowers have faded, and this is the best time to repot if necessary; but should the soil about its roots still remain in good condition, it will not be wise to disturb it. This species enjoys light, and delights in a free circulation of air if well charged with moisture; yet, like the Odontoglossums, it requires to be shaded during the hottest part of the day. Plants subjected to the above treatment will be found to grow vigorously, the exposure to the light will ripen the bulbs, and thus cause them to produce flower spikes more freely, and these when expanded are so exceedingly beautiful, that they will be found to repay one for every care and attention which may have been bestowed upon them.

When desirable to increase the number of plants of this species, propagation may be effected by division just at the time the new growth appears—not less than two old bulbs being left at the back of the leading shoot. These divided pieces should be placed in small pots, using the same compost as that previously recommended, then put them in a shady part of the house until they begin to grow and new roots are formed, after which they may be treated as established plants. Mesospinidiums are not very subject to the attacks of insects, but should they become infested these pests will soon injure the young growths if not speedily destroyed.

Pl. [illegible]



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CATTLEYA BICOLOR

CATTLEYA BICOLOR.

[PLATE 318.]

Native of Brazil.

Epiphytal. *Pseudobulbs* terete, long and slender, from a foot to two and a half feet in height, jointed and deeply striated, clothed with numerous deciduous pale brown sheaths, and bearing on the apex a pair of oblong-lanceolate, obtuse leaves, these are slightly carinate, coriaceous in texture, and about six inches long, deep green on the upper side and paler beneath. *Peduncle* terminal from between the leaves, and bearing from two to six flowers. *Flowers* from three inches to four and a half inches across; *sepals* spreading, the dorsal one oblong-lanceolate, acute, much longer than the lateral ones, which are somewhat falcate; *petals* broadly spathulate and prettily crisp at the edges, colour variable, but in this variety the sepals and petals are of a rich bronzy olive-brown; *lip* entirely destitute of side lobes, oblong-cuneate, reflexed, with a depressed central line, and recurved dentate margin, whilst the apex is broad and bilobed, the colour in this variety is wholly rich rosy purple or magenta-purple. *Column* broad, triquete, concave in front and convex behind, quite naked and exposed through the absence of lateral lobes to the lip, purple, and streaked beneath with white.

CATTLEYA BICOLOR, *Lindley, Botanical Register*, 1836, t. 1919; 1838, Misc., p. 80; *Id., Sertum Orchidaceum*, t. 5, fig. 1; *Hooker, Botanical Magazine*, t. 4909; *Lemaire, Jardin Fleuriste*, t. 379; *Dictionary of Gardening*, 281, fig. 384; *Britten and Gower's Orchids for Amateurs*, p. 82, with fig.; *Williams, Orchid-Grower's Manual*, 6 ed., p. 174.

EPIDENDRE IRIDEE, *Descourtilz's Drawings*, p. 105, t. 49.

EPIDENDRUM BICOLOR, *Reichenbach fil., Xenia Orchidacea*, ii., p. 27.

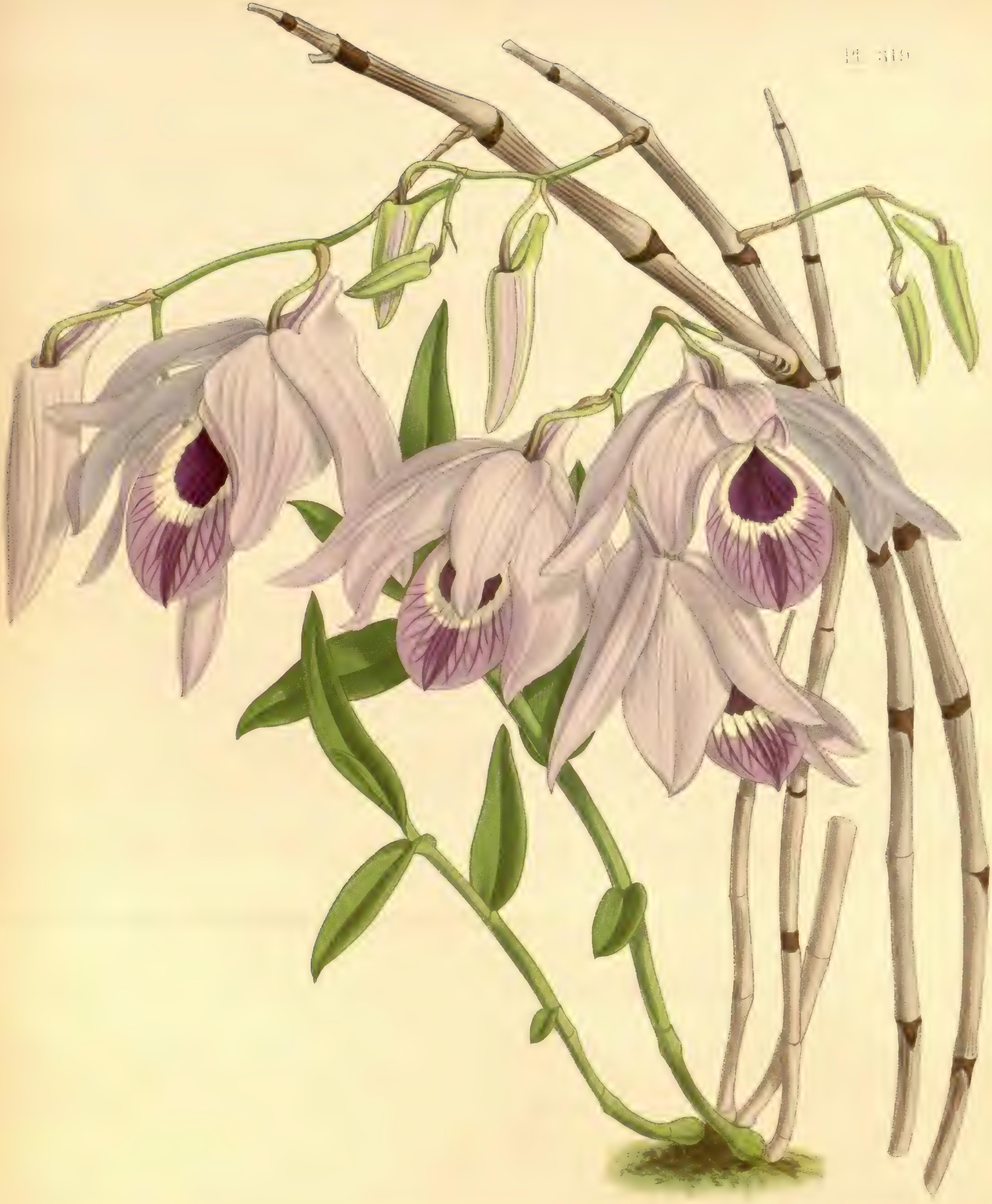
To many cultivators of Orchids this species of Cattleya is an old acquaintance, it having been introduced to this country in a living state many years ago by Messrs. Loddiges, of Hackney, and it was in their celebrated establishment that we first saw it in flower. Hooker, in the *Botanical Magazine*, 1856, says, "this plant was introduced by the Messrs. Loddiges in the year 1838," but in a Catalogue of plants cultivated at Hackney, issued in 1849, and which, as far as we know, was the last one published by them, the Messrs. Loddiges record its date of introduction as 1837. The plant, however, appears to have been first discovered by M. Descourtilz in the neighbourhood of Bom Jesus de Bananal, in the province of Minas Geraes. This gentleman made drawings on the spot of his discoveries, and these were afterwards published by Dr. Lindley, as quoted above. It was from this same locality that the Messrs. Loddiges received their plants, where it is said to grow in huge masses upon the trunks and branches of the largest trees—apparently preferring those growing near or overhanging streams of water. It also occurs on the mountains of the province of Rio Janeiro, at an elevation of some 2,000 feet, in situations where it is subjected to dense dews at night, and the heavy rains which occur during its growing season. This species is remarkable for being quite destitute of lateral lobes to the labellum, and thus the column, which, in the majority of Cattleyas, is completely hidden by the convolute side lobes, is in this plant left entirely bare and exposed; something of the same kind, indeed, occurs in the section to which *C. Aclandiæ* belongs, but in that species there are rudimentary lateral lobes developed.

Cattleya bicolor is a very distinct and desirable species; it also has the additional recommendation of blooming in the autumn months when flowers are usually scarce, and single flowers when mounted are very much in request for button-hole decoration and other purposes. Our drawing was taken from a well-grown specimen in the fine collection of R. J. Measures, Esq., Cambridge Lodge, Flodden Road, Camberwell; at the same time another distinct variety of this plant, named *Measuresiana,* was flowering, which we hope to have the opportunity of figuring at some future time.

Cattleya bicolor is a free-growing and profuse-blooming Orchid, having slender terete striated stems, which are from eighteen inches to two or more feet in height, bearing upon their summit a pair of oblong-lanceolate, dark green leaves. The scape is terminal, bearing several flowers which are thick and fleshy in texture, and yield a perfume resembling that of the common white garden Pink (Dianthus); sepals and petals pale green, suffused with a coppery brown tinge; lip rich rose-purple, wavy at the margin, and the lower part of a lighter rose colour. It blooms during August, September and October, and continues in perfection for several weeks. As before remarked, the stems of this Cattleya are thin and wiry, and entirely unlike the thick and fleshy pseudobulbs of the Mossiæ section, consequently it requires a greater amount of moisture about it during the hot summer weather; syringing the stems during the warm days will greatly benefit this plant, and materially assist it in developing robust bulbs and foliage, to be afterwards followed by a corresponding fine crop of large highly coloured blossoms; indeed, the bulbs should never be allowed to suffer from drought, for, should this occur, the plant will rapidly dwindle away.

The material which Mr. Simkins—who has charge of Mr. Measures' collection—uses for this species, is rough fibrous peat. The pots, however, are thoroughly drained by being filled three-parts full of potsherds, over which is placed a thick layer of sphagnum moss. The plant should be elevated upon a cone-like mound, well above the rim of the pot to afford a greater surface for the roots, and in order that the water may pass away rapidly from the young shoots. The intermediate or Cattleya-house suits this plant well, it should have good exposure to light, but must be slightly shaded from the hottest sun. It does not appear to like being disturbed when thoroughly established, neither does it like being cut for propagating purposes.

Pl. 319



J. Nugent Fitch, del. et lith.

DENDROBIUM MAC CARTHIÆ.

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DENDROBIUM MACARTHIÆ.

[PLATE 319.]

Native of Ceylon.

Epiphytal. *Pseudobulbs* terete, slender, pendant, as thick as a goose-quill, green, spotted with crimson, with a bulbiform base, and slightly swollen joints, from eighteen inches to two feet long. *Leaves* lanceolate acuminate, about three inches long, and nearly an inch wide, confined to the upper part of the stem, thin in texture, and light green. *Racemes* axillary, three to five flowered, the peduncles enclosed at the base in sheathing bracts. *Flowers* some three and a half inches in diameter, flattened vertically so as to appear only half expanded ; *sepals* lanceolate acuminate, nearly equal in length, pinkish-rose, or cherry-coloured ; *petals* oblong lanceolate, same colour as the sepals, but much broader ; *lip* as long as the petals, spathulate-trapeziform, round at the apex, white, spotted in the throat with purple, the front lobe broadly margined with rosy pink, and veined with lines of darker rose, or dark purple. *Column* white, tinged with deep rose-colour, sub-quadrate, with two slightly reflexed horns.

DENDROBIUM MACARTHIÆ, *Hooker* ; *Botanical Magazine*, t. 4886 ; *Bateman's Second Century of Orchidaceous Plants*, t. 158 ; *Williams, Orchid-Grower's Manual*, 6 ed., p. 291.

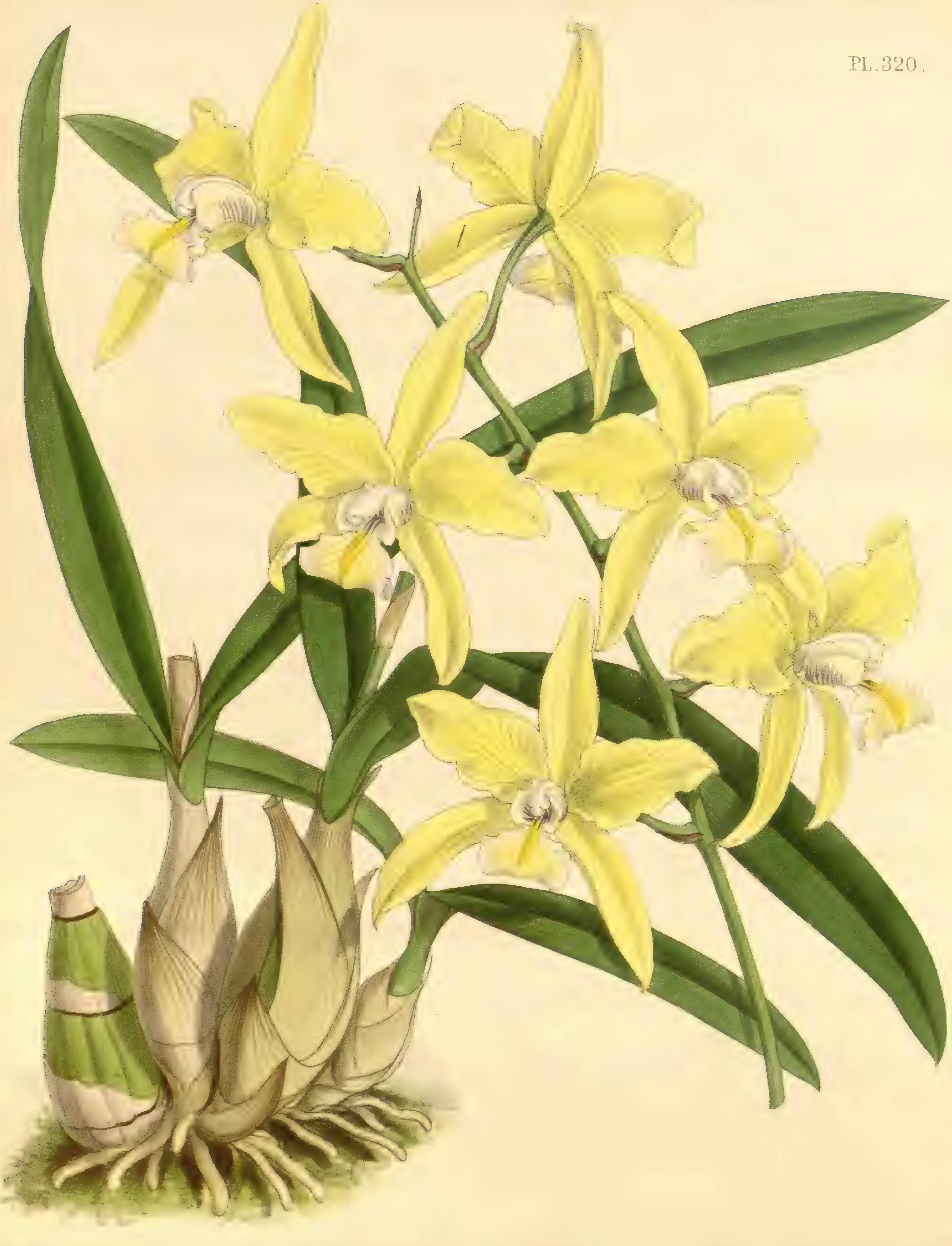
This is one of the most charming species of Dendrobium that has hitherto been discovered, numerous as are the beautiful members of this genus. It is peculiar to the island of Ceylon, and formerly used to be found abundantly upon the forest-trees about Ratna-poora, and in the neighbourhood of Galle ; but is not so plentiful at the present time, as it was a few years back. In its native country it flowers during the month of May, and this has led to its being called by the Cingalese, "Wissak-Mal," which signifies the Rainy-month flower, or May flower. In this part of Ceylon the rains are very heavy in May, June, July, and August, and during the whole season, even in the so-called dry season, there are frequent showers, quite sufficient to keep delicate Ferns, growing upon the walls, banks, and upon the trees, in a fresh and growing state, whilst the temperature is very equable, usually ranging between 75° and 85°. It is a scarce plant in cultivation, which is much to be regretted, its rare colour and peculiar shape rendering it a perfect gem amongst Orchids ; it is also remarkable in its genus for the great duration of its flowers. This species has always been found difficult to cultivate, and yet formerly many fine plants were to be found in our collections, and during the past year several plants with fine flowers bloomed with us in the Victoria and Paradise Nurseries. Our plate was drawn from a well-grown plant which flowered in the collection of Major-General Berkeley, Sibbertoft, Market Harboro', in August, 1887, who has himself collected and sent home many examples of this fine Dendrobe, and numerous other valuable Orchids.

Dendrobium Macarthiæ is a charming species, and a deciduous plant, losing its leaves soon after its growths are thoroughly matured, it produces its blossoms three and four together on a short spike which springs from the nodes, and often flowers a second time from the same bulb. The flowers are flattened vertically, so as to appear half-expanded, these consist of lanceolate sepals, oblong-lanceolate petals, which are broader than the sepals, and are of a bright rosy lilac colour ; the lip is spathulate-trapeziform, white in the lower part, with small purple spots in the throat, a large deep purple blotch on the disc, and an ovate rosy purple front lobe, marbled with lines of a darker purple. It blooms under cultivation during the summer and autumn months, and continues in full beauty for several weeks.

We find this species grows well in the East India-house, placed in a position where it receives a large amount of sunshine ; it should be located near the glass so that it derives a little shade from the rafters of the house during the hottest part of the day, but it enjoys sunshine all day long; this enables it to grow with vigour, and thoroughly ripen its bulbs. It requires an abundant supply of moisture during its growing season, and when at rest careful attention must be given it in order to prevent the slender stem-like pseudobulbs from shrivelling. We find this plant thrives well in small baskets, or pans; these must be thoroughly drained, and the plants made firm with rough fibrous peat, and live sphagnum moss. It cannot be denied that this species requires a great amount of care in its cultivation, and it is best to commence with a good healthy example, if there are several plants in the collection try them in different places and positions, always maintaining a strong heat and moist atmosphere; and if any one position seems to suit it better than another, remove them all to the favourite spot. It is a singular and remarkable fact, that a plant one sees growing vigorously in one collection, is often found to be very difficult to manage in another place at no great distance, so it is with this Dendrobium; but its rare beauty will amply compensate all the extra care which may be bestowed upon it.

The plants of this species will be found to enjoy a slight syringing every day during the summer, moreover, it tends to keep them free from insects, such as the red-spider and thrips, to the attacks of which it is very liable, and as its foliage is thin in texture if these pests are not destroyed they will quickly ruin it.

PL. 320.



LÆLIA ALBIDA SULPHUREA.

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LÆLIA ALBIDA SULPHUREA.

[PLATE 320.]

Native of Mexico.

Epiphytal. *Pseudobulbs* clustered, ovoid or sub-pyriform sulcate, about three inches high, enveloped in numerous membraneous scales, and bearing upon the apex a pair of linear-lanceolate, acute leaves, which are leathery in texture, from three to six inches long, and deep green. *Scape* terminal from between the leaves, erect, slender, from a foot to eighteen inches or more long, and bearing upon the upper portion a somewhat lax raceme of from five to eight flowers, which are about two and a half inches in diameter, yielding a grateful perfume, resembling the odour of primroses. *Bracts* numerous, ovate, sessile; *sepals* oblong-lanceolate; *petals* oblong-ovate, much broader than the sepals, undulate, with a broad mid-rib, both sepals and petals sulphur-yellow; *lip* oblong, three-lobed, lateral lobes erect, but not closed over the column, front lobe reflexed, sulphur-yellow, the crest orange, bordered with rose, the inner side of the lateral lobes streaked with purple. *Column* concave, white, suffused with purple.

LÆLIA ALBIDA SULPHUREA, *Reichenbach fil.*, *Gardeners' Chronicle,* 1884, xxi., p. 76; *Williams, Orchid-Grower's Manual,* 6 ed., p. 349.

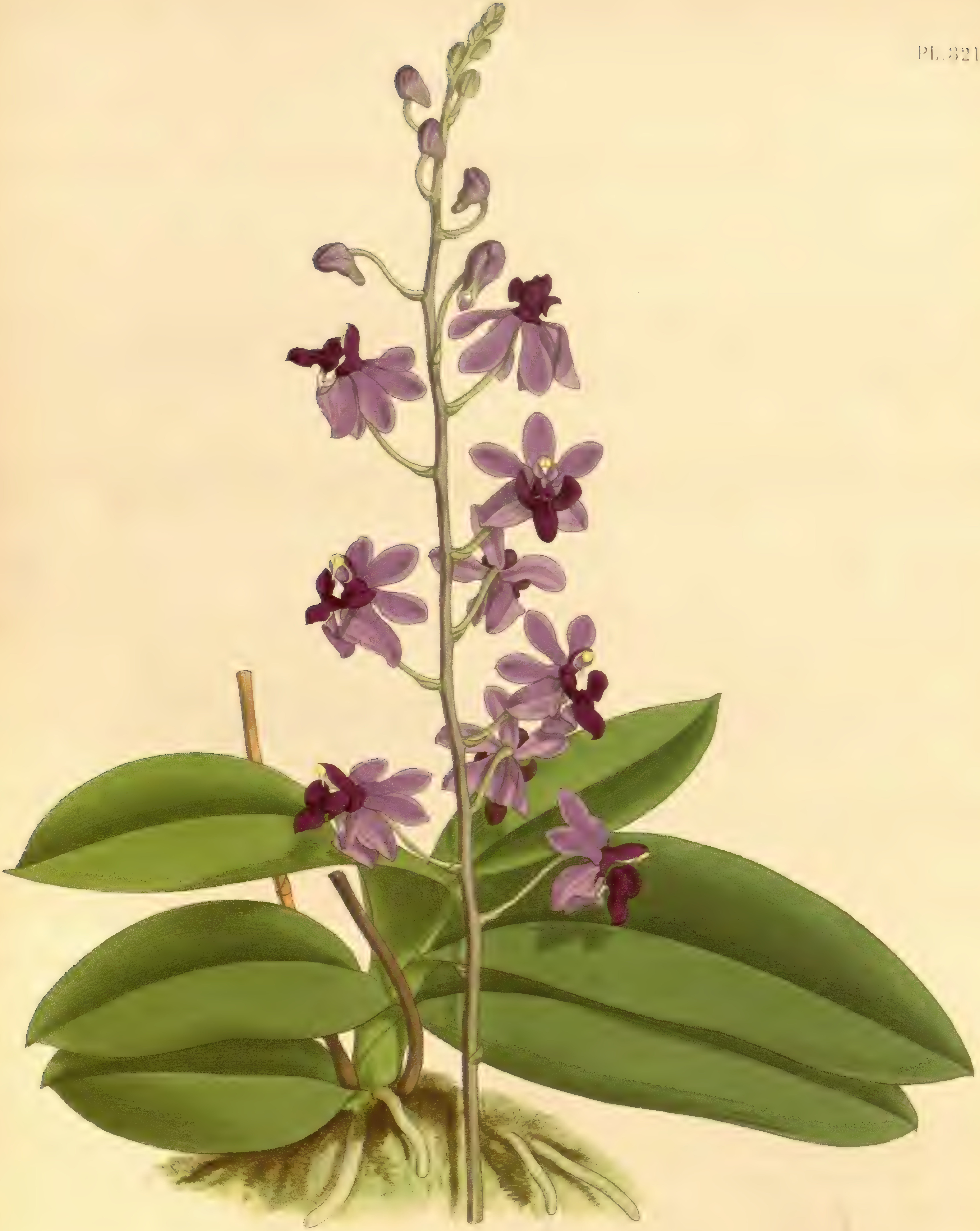
A figure of the typical *Lælia albida* appeared in the third volume of the *Album,* t. 138, and in the fifth volume, t. 239, is an excellent portrait of the *Lælia albida bella*; nevertheless, we have no hesitation in introducing another form of this species here, feeling sure it will be welcomed on account of its extreme beauty, as it is so very distinct from the type, and there is little doubt that its novel colour will cause it to be eagerly sought after by lovers of these Mexican Lælias. The form of *sulphurea*, here figured, is by far the best, both in shape and colour, that has hitherto come under our notice. The typical *Lælia albida* has been imported in large quantities during the past few years, chiefly from the neighbourhood of Oaxaca, in Mexico, some of the collectors sending home enormous masses of this species; and it is from amongst these that this and other varieties have been obtained. Our illustration was taken from a fine well-grown specimen in the collection of S. T. Walley, Esq., Smallwood, Fallowfield, Manchester, where it bloomed in November, 1887, bearing six spikes of its charming flowers.

Lælia albida sulphurea is a lovely chaste variety, like the species, it is a compact evergreen plant; the pseudobulbs are oval, sulcate, about three inches high, each bearing a pair of lanceolate acute leaves; the spike is produced from the top of the bulb after growth is completed; the sepals and petals are sulphur-yellow, whilst the lip is crested with orange, the anterior lobes being tipped with a dull rosy purple colour. Independent of their beautiful colour, these flowers are deliciously fragrant, which considerably enhances their value, as everyone admires sweet-scented flowers. It blooms in our stoves during the months of November and December, and remains in beauty for several weeks.

The specimen here pourtrayed was grown by Mr. Maulden, the gardener in charge of Mr. Walley's collection. It was planted in a basket and suspended near the roof-glass, in order that it might receive the full benefit of the sun and light, whilst the potting material was simply rough fibrous peat. All Mexican Orchids require a great amount of sun under cultivation; a slight shade is, however, beneficial during the hottest part of the day, as it prevents the leaves from becoming scorched by the glass. In their native country these plants grow at from 1,000 to 6,000 feet elevation exposed to the full sun and rain, where it is very hot during the day, and the nights very cool. While they are growing a liberal supply of water is absolutely necessary for their roots, and a slight syringing daily.

OBITUARY (John Day, Esq.).—It is with sincere regret that we here record the death of one of the oldest and most enthusiastic of English Orchid growers, which took place at Tottenham, on Sunday, January 15th, at the age of 63. Mr. Day did much towards the development of the public taste for this class of plants, and was himself one of the most generous investors in good and rare Orchids, as the plants in the two collections which he gathered together during his lifetime fully testified. The first collection he possessed especially, contained some of the choicest species and varieties that were to be found in cultivation; and we ourselves have from time to time obtained from him, by exchange or purchase, many wonderful specimens of great value. Mr. Day has often assured us that for his knowledge of Orchids, and his success in their cultivation, he was much indebted to the information he derived from a study of the ORCHID GROWER'S MANUAL, a copy of which he obtained as soon as he commenced his collection of these plants. As a gentleman and neighbour Mr. Day was one of the most genial and warm-hearted men we have ever met. He was a clever artist, and took the keenest interest in making coloured drawings of all flowers which he admired, of which he must have left behind him a marvellous and valuable collection. For some years past he was in the habit of taking trips abroad during the winter months to tropical countries, travelling about there in search of Orchids and Ferns in their native wilds, and he frequently succeeded in finding and bringing home some good and rare kinds, which were an increased source of delight to him. His knowledge of Orchids was very extensive, and his name will long be remembered with pleasure and reverence by the cultivators of this class of plants. We have had the pleasure of Mr. Day's acquaintance for many years, even before he began the cultivation of Orchids. His first love amongst plants was the Fern family, of which he amassed a fine collection of rare and beautiful species, and his admiration for these plants continued to the end, notwithstanding his intense love for Orchids.—B. S. W.

PL. 321.



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PHALÆNOPSIS ESMERALDA.

PHALÆNOPSIS ESMERALDA.

[PLATE 321.]

Native of Cochin China.

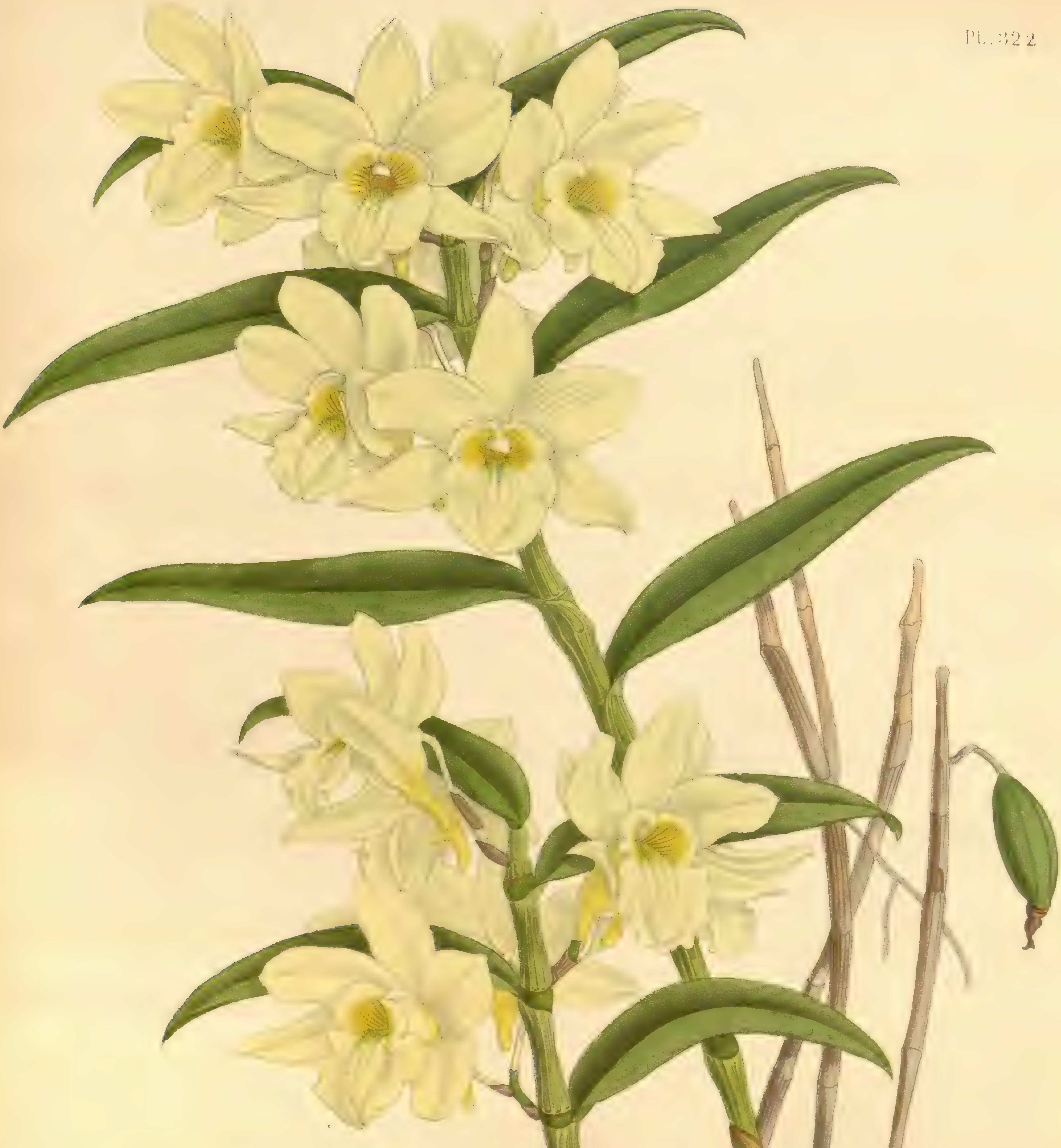
A stove Epiphyte, with oblong-ligulate and acute leaves, these are distichous, spreading, and sheathing at the base, slightly carinate beneath, about eight inches in length, some two inches in breadth, and deep green. *Scape* lateral, erect, about a foot high, bearing a raceme of from ten to twenty flowers, the individual blooms being an inch or more in diameter; *sepals* and *petals* oblong-obtuse, nearly equal, the lateral sepals slightly the broader, all of a brilliant amethyst colour; *lip* three-lobed, lateral lobes oblong-divaricate, erect, middle lobe linguiform, obtuse and decurved, same colour as the petals. *Column* stout, somewhat clavate.

PHALÆNOPSIS ESMERALDA, *Reichenbach fil.*, *Gardeners' Chronicle*, 1874, N.S., ii., p. 582; *Floral Magazine*, 2 *series*, t. 358; *Williams*', *Orchid-Grower's Manual*, 6 ed., p. 529.

This distinct species of Phalænopsis is a native of Cochin China, and its flowers though small are of a brilliant colour, which will be readily acknowledged by a glance at our drawing, its blooms are much richer in colour, and thoroughly distinct from all other species of Phalænopsis that we have seen. It varies much from such large-flowered kinds as *P. amabilis, P. grandiflora, P. Schilleriana*, and many others. The species here portrayed has an erect spike, which bears a raceme of many flowers, and although these are small in size compared with those kinds we have previously named, this species well deserves a place amongst them for its distinctive character. It will also be a grand subject for hybridisers to cross with the larger-flowering kinds, in order to produce the colour in their sepals and petals, to obtain which would be a great acquisition for Orchid cultivators generally, and especially for those who grow Phalænopsids extensively. In our opinion, when well grown, there are no Orchids to excel Phalænopsids, and although there have been many new species and varieties introduced within the last few years, none have yet surpassed the three kinds enumerated above, with their graceful spikes and large flowers. Some of the newly introduced forms are a great acquisition, as may be seen by reference to the fifth volume of the present work; where on plate 209 will be found a portrait of *P. Sanderiana*; plate 229, *P. Casta*; and plate 237, *P. Stuartiana*; and several other species with smaller flowers in other volumes. Our plate was taken from a well-grown specimen in the fine collection of R. J. Measures, Esq., Cambridge Lodge, Flodden Road, Camberwell, where there is a fine collection of Phalænopsids, a house being set apart for their cultivation; they are under the care of Mr. Simpkins, the gardener.

Phalænopsis Esmeralda is a dwarf, compact, evergreen species, and a perfect gem as regards the colour of its flowers. The leaves are oblong, ligulate, acute, of a peculiar shade of green; the scape issues from the axils of the leaves, and attains a height of from fifteen to twenty inches, bearing a raceme of numerous flowers, which are of a uniform brilliant amethyst colour, having bluntly oblong sepals and petals, and a three-lobed lip. It blooms during the summer and autumn months, and continues flowering for several weeks. We find this plant requires the heat of the East India house, and will thrive equally well either in a pot or hanging basket, with sphagnum moss and good drainage. It also requires a liberal supply of water to the roots during summer; but a much less quantity during autumn and winter will suffice. At this season, however, the moss should be kept moist, bearing in mind to keep the foliage in a plump state, as these plants continue to grow nearly all the year round. Shade is very necessary for this Phalænopsis during summer, as it will deteriorate if the sun is allowed to shine full upon its leaves during the hottest part of the day; a little sun in the early morning, before it attains power, will not injure the foliage, and the same in the afternoon, when the sun is on the decline, will tend to strengthen it, and render the leaves more robust and firm in texture, which enables it the better to withstand the long dreary winters we are often subjected to. This is a free-rooting plant, and with ordinary care can be induced to flower most profusely. It is also a species which is not very delicate, and will undergo more hardships than most Phalænopsids. It should be grown in a light place, not too far from the glass, always keeping good and sweet material about the roots, but not much of it; decayed moss is especially injurious, but if it is kept in a growing condition it will be found most beneficial to the health of the plant. The foliage must be kept free from insects, as sometimes scale and thrips will attack it, and if allowed to remain, will speedily prove injurious; but these pests can be easily removed by washing with a sponge and clean water.

PL. 322



DENDROBIUM LUTEOLUM CHLOROCENTRUM

DENDROBIUM LUTEOLUM CHLOROCENTRUM.

[PLATE 322.]

Native of Moulmein.

Epiphytal. *Stems* terete and erect, bearing numerous distichous leaves, which are deciduous, oblique and acute, some two inches long and deep green. *Racemes* lateral, two to four-flowered, the individual flowers thick and fleshy in texture and about two inches in diameter; *sepals* and *petals* nearly equal, ovate-lanceolate and obtuse, of a uniform soft primrose-yellow; *lip* three-lobed, lateral lobes rounded, erect, streaked on the inside with narrow lines of crimson, middle lobe oblong, convex and emarginate, like the lateral lobes, primrose-yellow stained with orange, and bearing on the disc tufts of green woolly hairs, the throat being orange-yellow; *spur* short and obtuse, slightly curved.

DENDROBIUM LUTEOLUM, *Bateman, Gardeners' Chronicle,* 1864, p. 269*a*. *Botanical Magazine,* t. 5441*; Williams, Orchid-Grower's Manual,* 6 ed. p. 291.

DENDROBIUM LUTEOLUM CHLOROCENTRUM, *Reichenhach fil, Gardeners' Chronicle,* N. S. xix, 340, f. 48; *Williams, Orchid-Grower's Manual,* 6 ed., p. 291, *with figure.*

The plant we here bring to the notice of our subscribers is a very beautiful variety of *Dendrobium luteolum,* the blossoms of which are larger and far superior to those of the typical form. It is of a vigorous habit of growth and also very free in the production of its flowers, which expand during the winter months—a season when flowers are in constant demand, especially when they are of a colour that is popular for decorative purposes. It is also compact in habit, and occupies but little space, so that specimens of this variety are easily accommodated. This form was introduced by us from Moulmein, where it grows wild upon the branches of the forest trees, in localities subjected to heavy rains during its growing and flowering season. During the dry season the plants are at rest; but even then, heavy dews prevail at night, which materially assist them to withstand the extreme heat of the dry hot days; besides which, growing upon trees there is a certain amount of shade, which is highly beneficial as it prevents them from shrivelling. As soon as the rainy season begins the pseudobulbs swell to their original condition and produce their flowers, after which the new growth is formed and matured before the dry season again sets in.

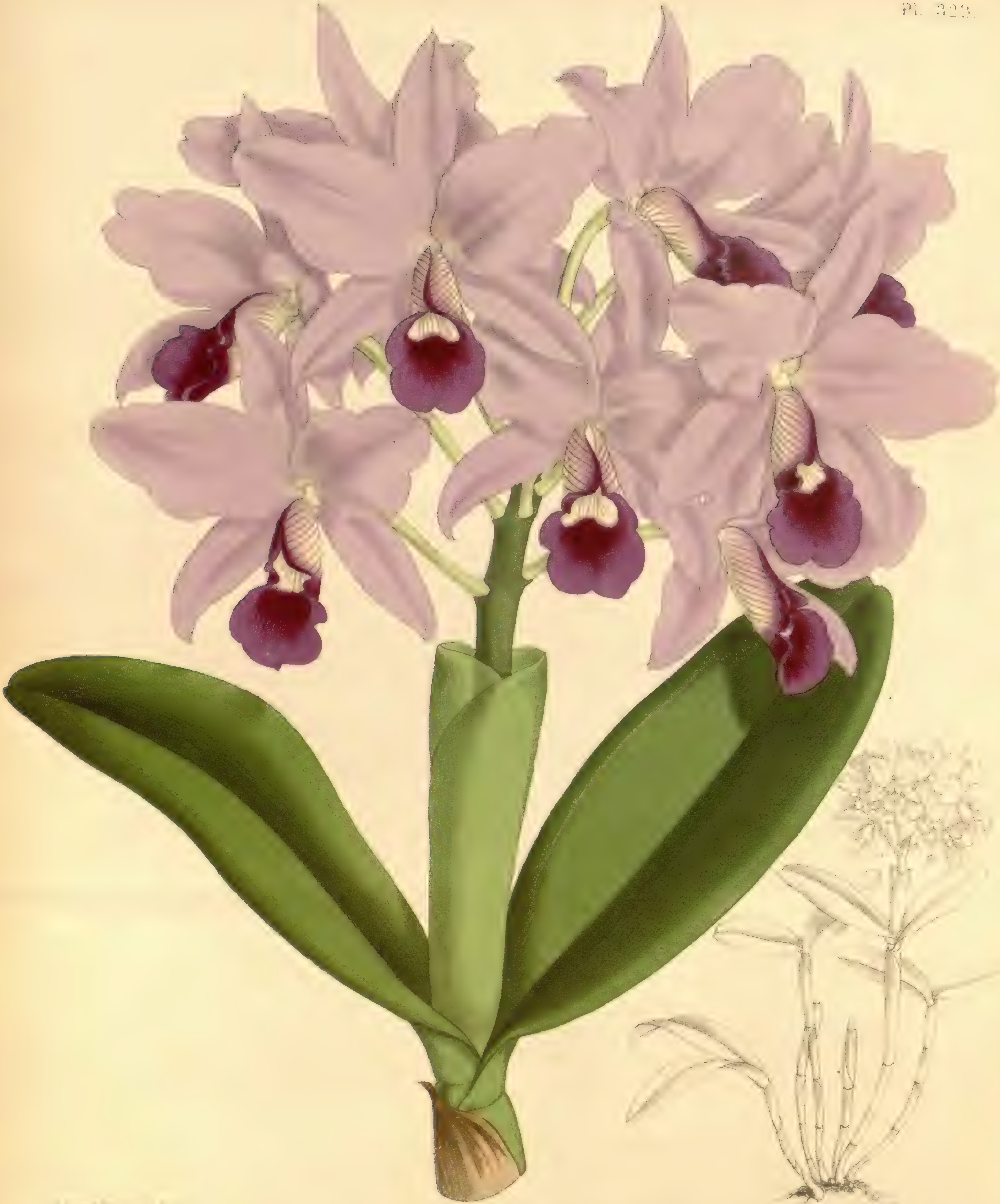
For the drawing from which our artist prepared the annexed plate we are indebted to the kindness of W. Lee, Esq., Downside, Leatherhead; the plant from which it was taken being a beautiful specimen grown by Mr. Woolford, who has this large collection of Orchids under his care.

Dendrobium luteolum chlorocentrum is a deciduous plant, and produces its charming flowers on short spikes, two or more together, after it has completed its growth. The stems are erect and terete, bearing thin lanceolate leaves about two inches long. The ground colour of its flowers is primrose-yellow, the lip being orange colour, with tufts of green hairs on the middle, whilst the throat is also stained with orange. Its time for blooming, under cultivation, is through the months of January, February, and March, and it continues for a considerable time in full beauty.

This variety of Dendrobium requires the same treatment as the species; we find it thrive well in pans or baskets suspended from the roof and as near the light as possible; but a little shade is requisite during the hottest part of the day. The East India House suits it admirably, and during the growing season it requires an abundant supply of water to its roots, as well as slight syringings overhead during the warm summer days, which will help to prevent insects attacking the young growths. Its foliage being thin in texture, thrips and red-spider delight to feed upon it, which if allowed to accumulate soon weaken the plant, and render it unfit to bring forth its flowers in due season. The material we employ is a small quantity of rough fibrous peat, from which the fine part has been removed, adding some living sphagnum moss and a few lumps of charcoal; the pans or baskets must be well drained. After the growing season is over, which will occur during the autumn, the plant should have a period of rest; at this time just sufficient water to keep its bulbs plump is all that is necessary, and it should be borne in mind that it is a bad practice to allow any Orchid to shrivel.

This variety is easily increased from the young plants that originate on the old bulbs; when these are well matured and rooted, which will be after the flowering season, they may be removed and treated as recommended above. If the established plants are large, these may be divided, always leaving an old bulb at the back of the leading one.

PL. 329.



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CATTLEYA BOWRINGIANA.

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CATTLEYA BOWRINGIANA.

[PLATE 323.]

Native of British Honduras.

Epiphytal. *Pseudobulbs* erect, clavate, swollen at the base, when young enveloped in large loose sheaths, and from nine inches to a foot long. *Leaves* in pairs, narrowly oblong, obtuse, some six or eight inches in length and about two inches in breadth, thick and leathery in texture, and deep green. *Peduncle* issuing from between the leaves, enveloped in a somewhat narrow compressed pale green sheath, many-flowered. *Flowers* very highly coloured, and about three inches in diameter; *sepals* oblong-acute; *petals* much broader than the sepals, oblong-ovate and obtuse, all of a rich rosy purple, the netted veins being of a deeper hue; *lip* elliptical or oblong-oval, the basal part rolled over the column, the colour of the outside being rosy purple, front portion of the lip spreading, of a deep maroon-purple, throat white.

CATTLEYA BOWRINGIANA, *Veitch, Catalogue,* 1886, p. 10; *Id. Manual of Orchidaceous Plants,* pp. 31—2, with figs.

CATTLEYA AUTUMNALIS, *Hort.*

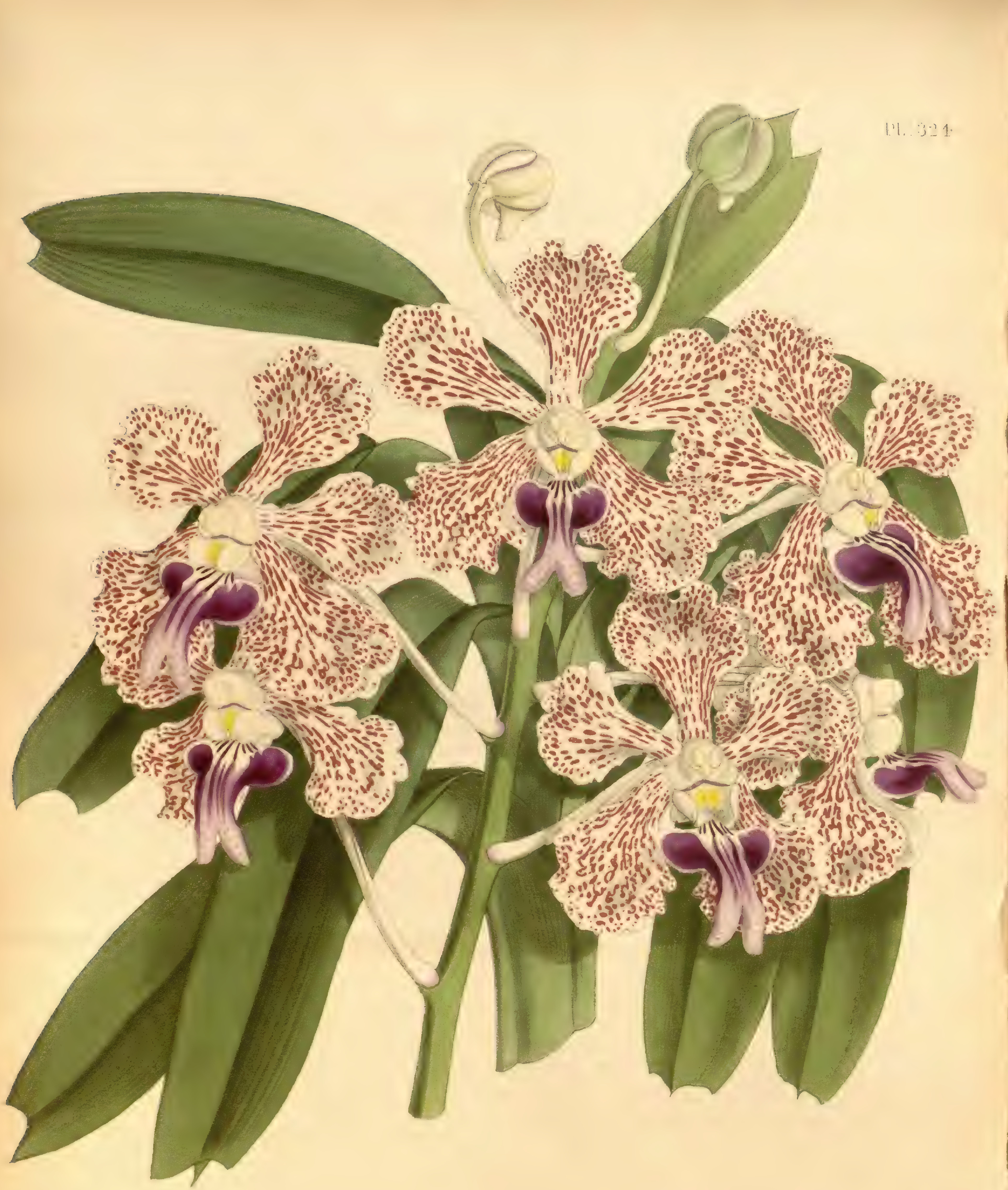
The subject of our plate is a newly introduced Cattleya, and one that will become a general favourite among growers for its distinct colour, and blooming as it does during autumn when few Cattleyas are in flower. This plant was introduced by the Messrs. Veitch & Sons, of Chelsea, in the year 1884, from British Honduras in Central America. It was found on cliffs by the side of streams, in close proximity to waterfalls, where these plants obtain a large amount of moisture during the whole year; whilst in the growing season the heavy rain falls induce the plants to make rapid growth. It must, however, be borne in mind that all through these excessive rainfalls they have a free circulation of air both night and day, which helps to strengthen their growth and bring their bulbs to maturity; if, on the other hand, we were to give these plants the same amount of moisture under glass we should soon destroy their young growth and roots. This was originally a rare plant, but last year large importations were received which have considerably reduced the price. The colour and shape of the flowers resemble *C. Skinneri*, but the bulbs are different, especially at their base, which is very peculiar in shape, and somewhat similar to those of *Epidendrum ciliare.*

Our plate is the portrait of a plant taken by Mr. Fitch from the fine collection of F. G. Tautz, Esq., Studley House, Shepherd's Bush, where it bloomed last autumn under the care of Mr. Cowley, the gardener.

Cattleya Bowringiana is a new and pretty evergreen species, with bulbs about ten to twelve inches high, swollen at the base, which makes it very distinct. Its leaves are from five to eight inches in length, of a lively green colour; the spike is erect, and contains from six to ten flowers; the sepals and petals are rose-purple; lip, same colour, but of a darker hue. It is a free-blooming plant, producing its flowers during the autumn months, which last some time in bloom.

This is a free-growing plant, and requires the heat of the Cattleya house; a good amount of water when in vigorous growth is necessary, as it grows and roots very freely. It requires all the light possible in order to mature the growths; if this is not done, the bulbs are apt to rot off during the dull winter months. This plant, as stated above, receives an abundance of water in its natural habitat, but any excess of moisture is carried away quickly in consequence of its growing on cliffs and rocks where there is but little material to retain it. In cultivation it will, therefore, require ample drainage to allow the water to pass freely away. Living sphagnum moss and fibrous peat is the best material that can be given. It is best grown in a pot or basket three parts full of potsherds, a layer of rough peat being placed upon it; let the plant be slightly elevated above the pot rim. This plant begins to grow after the flowering season is over, which is the best time to re-pot it should this be necessary. It should be shaded from the hottest sun in summer in order to keep the foliage in a green and healthy condition, for the beauty of any plant consists in fine foliage as well as fine flowers.

PL. 324



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B. S. Williams Publ.

VANDA SUAVIS. (*Chatsworth Var.*)

VANDA SUAVIS (CHATSWORTH VARIETY).

[Plate 324.]

Native of Java.

Epiphytal. *Stem* erect, laxly branched, and emitting a profusion of stout, white fleshy roots. *Leaves* distichous, ligulate, sheathing at the base, recurved and pendent, obliquely dentate at the ends, carinate beneath, leathery in texture, and deep green. *Peduncle* axillary from the upper leaves, bearing a more or less lax, drooping raceme of beautiful flowers, which are delicately fragrant, and upwards of three inches in diameter; *sepals* and *petals* nearly equal, spathulate, retrorse, convex, undulate or lobate at the edges, the latter twisted when fully expanded, so that the china-white of the reverse side is exposed to view, ground colour of both surfaces china-white, profusely spotted and streaked with deep rich purple in front; *lip* convex, three-lobed, middle lobe narrow and deeply bifid, rosy purple freckled with dots of deep purple and furnished with three raised lines or costæ on the disc; side lobes rounded or ovate, spreading, and with the upper part of the lip intensely rich violet-purple; the auricles erect, rotundate, white. *Column* short and obtuse.

Vanda suavis, *Lindley, Gardeners' Chronicle,* 1848, p. 351; *Id., Paxton's Flower Garden,* ii., t. 42, fig. 3; *Id., Folia Orchidacea, art Vanda,* No. 9; *Botanical Magazine,* t. 5174; *Bateman's 2nd Century Orchidaceous Plants,* t. 125; *Pescatorea,* t. 8 (var. media); *Orchid Album,* iv., t. 180; *Flore des Serres,* t. 641, fig. 3; *Id.,* tt. 1604—5 (Hrubyana); *L'Orchidophile,* vi. t. 301, fig. 1; *Id.,* fig. 2 (flava); *Id.,* fig. 3 (prætexta); *Botanical Magazine,* t. 4432 (flava); *Jennings' Orchids,* t. 23; *Xenia Orchidacea,* i., t. 12; *Gardeners' Chronicle,* n.s., xxii., 237, fig. 47 (Wingate's var.); *Williams, Orchid-Grower's Manual,* 6 ed., p. 607.

Vanda tricolor (*a*), *Reichenbach fil.,* in *Walper's Annales Botanices Systematicæ,* vi., 866.

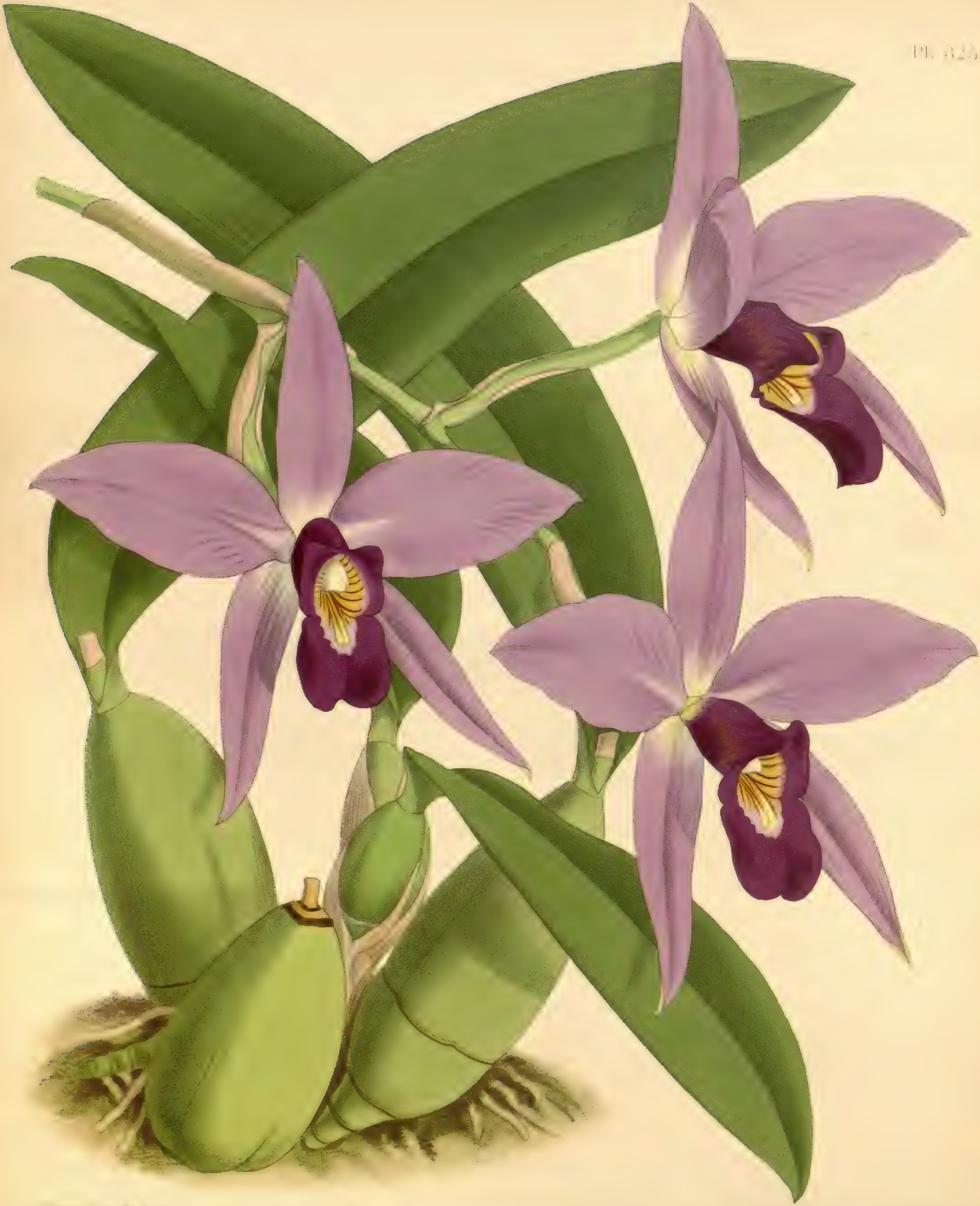
Vanda tricolor (*b*), *Hooker, Botanical Magazine,* t. 4432; non *Lindley.*

Vanda suavis (Chatsworth variety), *supra.*

There can be little doubt that *Vanda suavis* will always hold a high position among the Indian Orchids. We have already figured a form of this plant in our fourth volume, plate 180, and that we consider the true type of the species—a plant that was introduced some years ago by the Messrs. James Veitch & Sons, of Exeter, and now of Chelsea, it being one of the discoveries of their energetic collector, Mr. William Lobb. The Chatsworth variety of *V. suavis* differs materially in the spotting of its flowers, as will be seen by a comparison of the plates. This variety has been grown in the celebrated garden of the Duke of Devonshire, at Chatsworth, for many years past, and we have seen very fine large specimens there at different times, laden with fine spikes, bearing as many as fifteen flowers on a raceme. Grand specimens of this variety still exist at Chatsworth, under the care of Mr. Thomas. In our estimation, few plants can surpass these Vandas in their stately grandeur, their beautiful pendent vivid green foliage forming an excellent back-ground to their lovely blossoms. The flowers will last in full beauty for about six weeks, and when the plants are in vigorous health they will produce spikes two and three times in one season, which is not the case with the majority of Orchids. A house of Vandas, the different species and varieties being well represented, produces a grand display, the delicious aromatic odour of their flowers pervading the whole structure; and even when the plants are destitute of bloom they are extremely ornamental, and objects of attraction.

We are indebted to the kindness of the Duc de Massa, Château de Francouville, par Luzarches, France, for the opportunity of figuring this grand variety. The drawing was taken from a well-grown specimen, standing three or more feet high, bearing two very fine spikes. There is a large collection of Vandas grown in this establishment, and the Duc de Massa uses every effort to maintain the collection as complete as possible, as he considers this the finest genus of the whole Orchid family. *Vanda suavis* (Chatsworth var.) attains a height of four or five feet; and produces numerous lateral shoots from the sides and base of the stem. When this occurs, spikes of flower issue from the lateral growths as well as the main stem. An idea may be formed of what a glorious specimen it becomes, by referring to the illustration, on page 607, of the 6th edition of the *Orchid-Grower's Manual.* The flower spikes issue from the axils of the leaves on either side, and when the plant is well grown, two or more spikes will appear at the same time. The large flowers are white; the sepals and petals densely spotted and barred with rich purple; the upper part of the lip deep purple, the lower part being rosy-purple, ornamented with small purple spots. It blooms at various times of the year, and lasts a long time in beauty.

This Vanda requires to be grown in the East India house, with a winter temperature ranging from 60° at night to 65° by day, with artificial heat; if the sun should shine and increase the temperature a few degrees, it will greatly benefit the plants, but advantage should be taken of these occurrences to admit air, through the bottom ventilators only, however, in order to avoid cold draughts. We usually moisten our houses in the morning and evening, if the house is dry; but this operation should depend entirely upon the state of the exterior atmosphere. During the autumn and dull months of winter a small quantity of water will suffice, but in the warm days of summer a considerable amount will be necessary, and this should be spread over the paths and tables, but avoid watering the pipes to cause steam to rise. We do not advocate syringing this plant unless it becomes shrivelled, in which case it requires rather more shade than when in vigorous growth; we find it a good plan in summer to syringe between the pots and the lower portions of the plants. Shading is required during the time that the sun is most powerful in summer, but it enjoys all the light possible. The material we use is living sphagnum moss, with good drainage.



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LÆLIA ANCEPS SCOTTIANA

B. S. Williams publ.

LÆLIA ANCEPS SCOTTIANA.

[PLATE 325.]

Native of Mexico.

Epiphytal. *Pseudobulbs* ovate-oblong, compressed, with two acute edges, and ribbed on the flattened sides, when young clothed with membraneous sheaths, some six inches high, and monophyllous. *Leaves* oblong-lanceolate, obtuse, some six or eight inches in length, leathery in texture, and deep green. *Scape* terminal, erect, two or more feet in length, clothed with carinate sheathing bracts, ancipital, and bearing towards the apex a raceme of from three to five flowers. *Flowers* large, some five inches across; *sepals* lanceolate, acuminate; *petals* ovate, acuminate, double the width of the sepals, and, like them, of a rich purplish violet; *lip* three-lobed, side lobes convolute over the column, the front reflexed and deep purple, middle lobe oblong, obtuse, and apiculate, slightly recurved, and of a rich deep velvety purple; *disc* and *throat* orange, traversed longitudinally by an elevated thickened ridge, which terminates in front in three crests. *Column* semi-cylindrical, wingless.

LÆLIA ANCEPS SCOTTIANA, *supra.*

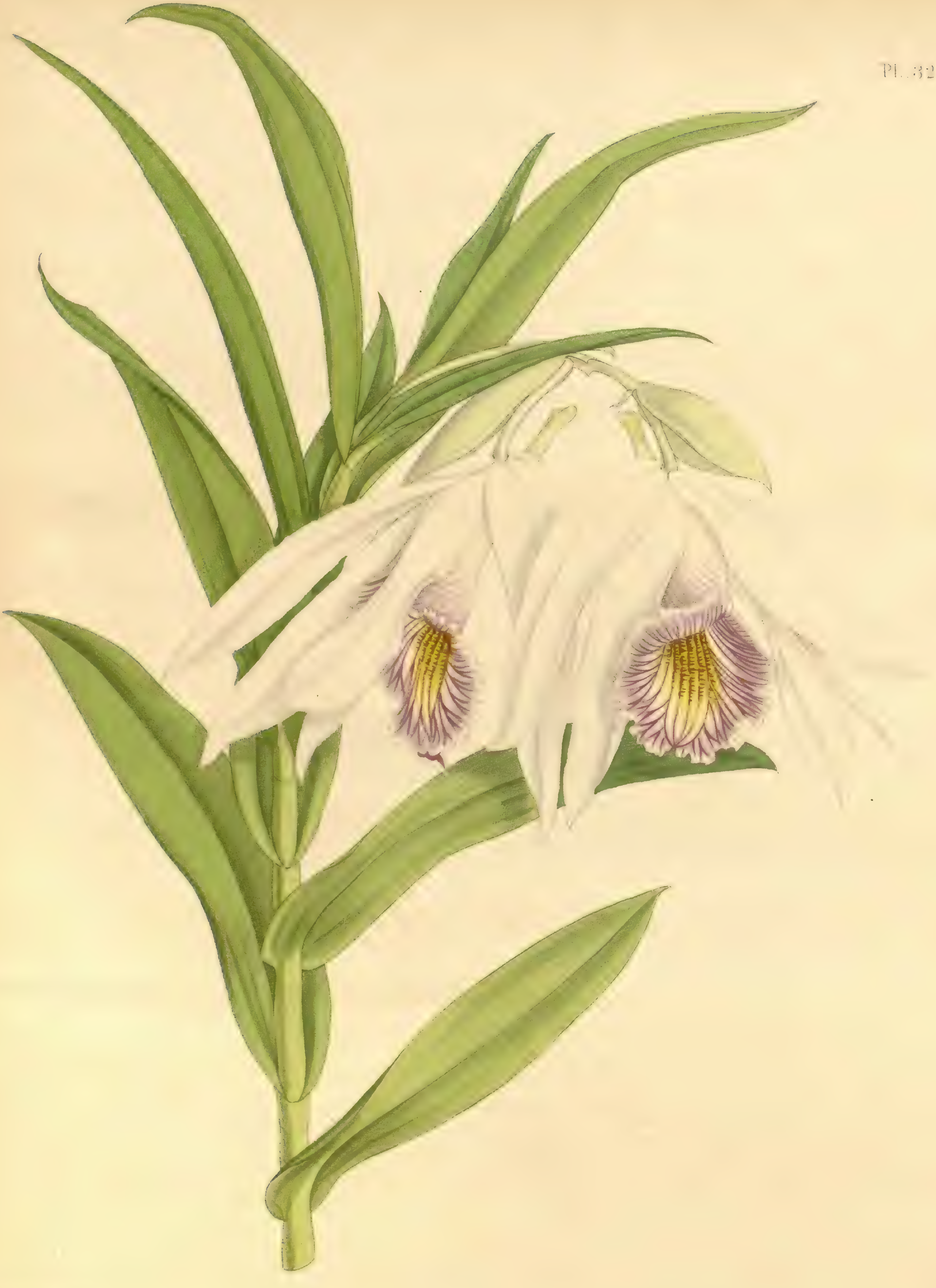
The forms of the Mexican *Lœlia anceps* have become very numerous, varying in their shades of colour from pure white to the darkest purple. A few years ago only two varieties of *L. anceps* were known, *i.e., L. anceps Barkeri* and *L. anceps Dawsoni*, these two forms being both introduced by the Messrs. Low, of Clapton, and some time afterwards came the beautiful *L. anceps alba*; since then the varieties have become very plentiful, for which we are indebted to the numerous travellers and collectors of plants in Mexico, who have sent us home huge masses of this plant, many of them of such a size as to suggest the idea that they have been growing and blooming in their native habitats for a vast number of years, probably unseen and untouched by the hand of man. The flowers of this beautiful species are called by the Mexicans El taro, and they are used by them for decorative purposes at their festivals. Plant collectors of the present day have a better opportunity of finding these plants, as they have not the opposition to overcome, which the earlier Mexican travellers had to contend with. The influence of money is everywhere strongly felt, and now, instead of keeping the strangers away, they encourage and assist them to explore the country; but, as Mexico is a very extensive place, it requires a long time, and a great expenditure of capital, to become thoroughly conversant with its more remote regions.

The variety we here lay before our subscribers is of a splendid colour, and it will afford a pleasing contrast with the lighter coloured and pure white forms. The flowers our drawing has been prepared from were sent to us by W. A. Scott, Esq., Nunfield, Dumfries, after whom it is named; this gentleman is rapidly forming a grand collection of Orchids. We have seen the present variety in flower for two consecutive seasons in this establishment, and thus we have proved that the intense colour is permanent, and we consider it much finer in colour than the variety Barkeri, which we have flowered annually for many years.

Lælia anceps Scottiana is a grand variety, resembling the typical plant in its habit of growth, but the flowers are much richer in colour. The blossoms are five inches across, of good form and substance, the sepals and petals being of a deep violet-purple, the lip deep purple, and the throat orange. It blooms during January and February, and continues some time in full beauty.

This plant requires precisely the same treatment as the species, that is to say, it should be placed at the coldest end of the Cattleya-house, near the glass, shading it but very slightly, this being the great secret in the cultivation of these Mexican Lælias, as unless they are well exposed to sun and light, they will neither produce robust bulbs nor flower freely. During its growing season an abundant supply of water is necessary to the well-being of this plant, and in warm weather, when it is making its young bulbs, it should be syringed twice daily (morning and afternoon), in order to induce it to root freely. It requires a high temperature during spring and summer; in its native country this plant, whilst making its growth, is subjected to strong heat and heavy rains, which keep the bulbs wet throughout the night, so that the greatest amount of moisture should be spread about in the afternoon, after the house is closed. When growth is finished, just sufficient water to keep it from shrivelling will be ample, until the spikes attain the height of about a foot, when more water will be requisite to enable them to produce fine flowers. *Lælia anceps* and its varieties will thrive either in baskets or in pots; they should have good fibrous peat and living sphagnum moss to grow in, whilst the best time to re-pot them is just when they begin to grow and make new roots.

PL. 326



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THUNIA VEITCHIANA.

[Plate 326.]

Garden Hybrid.

Terrestrial. *Stems* reed-like, erect, deciduous, one and a half to two feet in height, somewhat swollen at the base, tapering upwards, clothed with distichous sheathing, pale green leaves, and bearing at the apex a dense raceme of flowers. *Leaves* membraneous, oblong-lanceolate, acuminate, and sheathing at the base. *Raceme* terminal, nodding, bearing numerous large and showy flowers, each furnished with a large concave ovate-lanceolate bract, which encloses it when in the bud. *Sepals* and *petals* nearly equal, slightly spreading, ligulate-acute, white faintly tinged with pink, and tipped with mauve; *lip* large, convolute over the column, produced behind into a short, straight, obtuse, bifid spur, the anterior portion spreading, with a white, undulated and crisp border all round; ground colour pale purplish mauve or violet-mauve, yellowish white in the throat and on the disc, where it is ornamented with numerous raised lines, which are fringed with hairs of purplish orange.

Thunia Veitchiana, *Reichenbach fil.*, *Gardeners' Chronicle*, n.s., 1885, xxiii., p. 818.

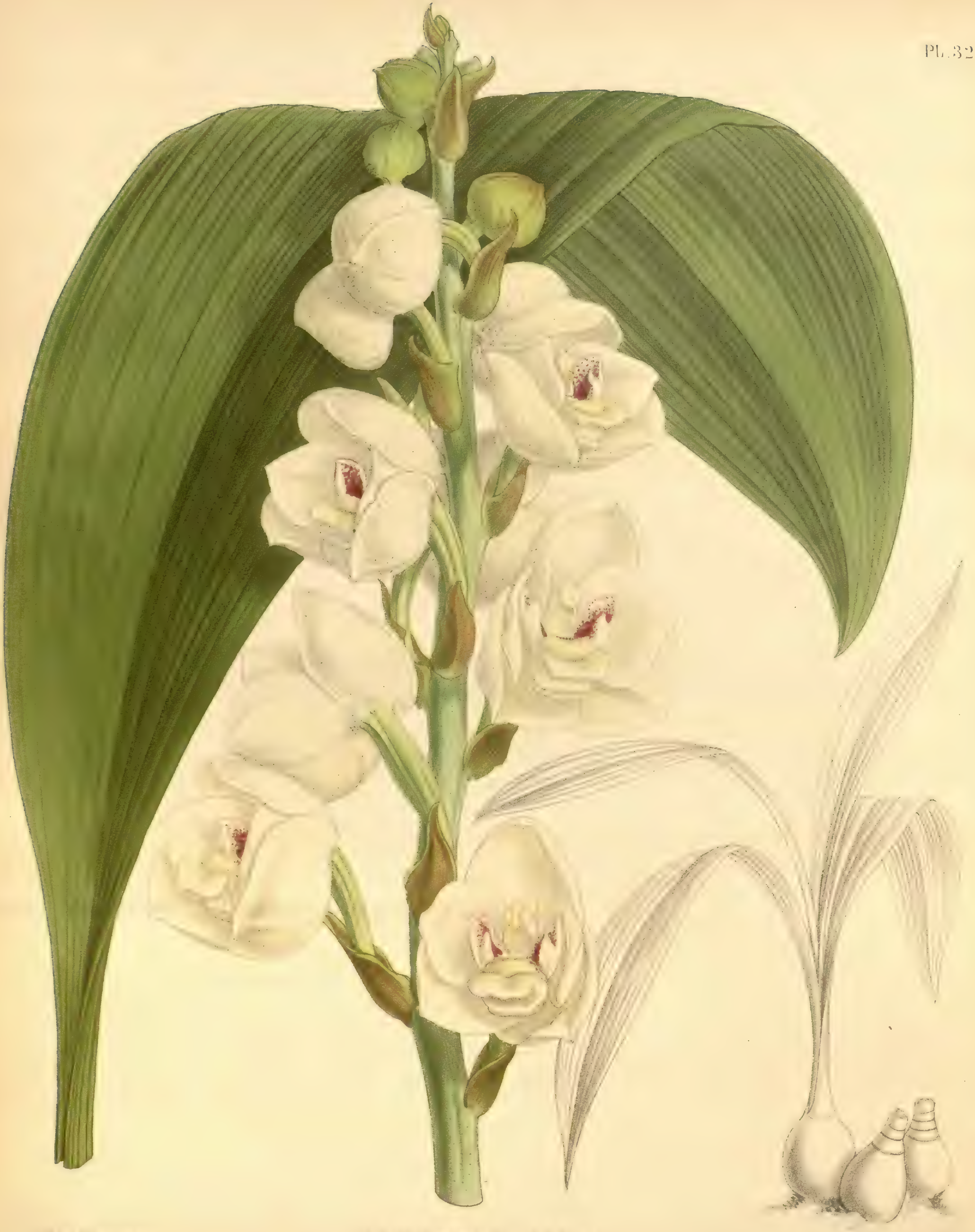
Thunia Wrigleyana, *Hort.*, *Toll.*

The members of this small genus of Asiatic Orchids are, by some authorities, included with Phajus, and under that name were cultivated for many years. They can, however, be readily distinguished from that genus by their manner of growth, deciduous leaves, terminal drooping racemes of flowers, and by several other striking differences. Professor Reichenbach refers the genus *Thunia* to the tribe Arethusæ, and sums up the distinctions between it and Phajus in the following words:—"Thunias have a terminal inflorescence on the leafy shoots, whilst Phajuses have their inflorescence and their fascicles of leaves apart; Thunias have fleshy membraneous leaves, Phajuses have plaited ones; Thunias have persistent, Phajuses deciduous bracts; Thunias have four, Phajuses eight pollen masses." There are several beautiful species of Thunia, two of which are already figured in this work: *T. Bensoniæ*, in volume ii., plate 67, and *T. Marshalliana*, in volume iii., plate 130. These two we consider the best of the species yet introduced. They make grand specimens for·exhibition purposes, as they are free both in growth and flower; and O. O. Wrigley, Esq., of Bury, has exhibited some wonderful plants of these two kinds at the Royal Botanic Gardens, in Manchester, where they were very attractive objects, from their colours and manner of growth being so distinct from all other Orchids. We here bring a new hybrid to our readers' notice, which, when well grown, is worthy to take its place beside the two kinds previously named, as its flowers are large, chaste, and beautiful. This plant is a garden hybrid, the result of a cross between *T. Bensoniæ* and *T. Marshalliana*, and the beauties of the two parents are admirably blended. It appears to have been raised first by the late Mr. G. Toll, of Manchester, who named it in honour of a well-known grower of Orchids in Lancashire, viz., E. G. Wrigley, Esq., of Preston. Mr. Toll's stock of these plants passed into our hands, from one of which our present illustration was taken. It has also been raised by the Messrs. Veitch, and was exhibited by them under the name of *T. Veitchiana;* whilst at the same time it was being shown by us under the name of *T. Wrigleyana*, at the Royal Botanic Society's meeting, Regent's Park, in May, 1885.

Thunia Veitchiana, like its parents, is a deciduous plant, and grows in the same manner, having erect leafy stems, which are terete and fascicled, from one to two feet in height, attaining even to greater dimensions as the plant becomes vigorous. It is a free-blooming subject, producing its flowers from the apex of the stem on a drooping spike, and it continues bringing forth its blossoms for a considerable time. The sepals and petals are white, slightly tinged with mauve at the tips; the anterior portion of the lip is a fine mauve-purple, and the lower part is white, with some mauve-purple veins, and margined with a lighter colour, the keels on the disc being of a peculiar orange-purple. It blooms during the months of May and June, and continues some weeks in full beauty.

This Thunia requires the same treatment as the other members of the genus. They are greatly benefited by giving them good brisk heat during the spring and early summer, which is their growing season, and they begin to bring forth their flower spikes when the stems have nearly reached maturity. They require an abundant supply of moisture at their roots until growth is completed; but when at rest they should be placed on a shelf near the glass, and fully exposed to the light, in order to ripen their stem-like bulbs, at which time just sufficient moisture to keep them from shrivelling will be ample. We strongly advise their being placed in a light position, as when put away into the shade they are frequently neglected and lost. As soon as returning life begins to show itself, the supply of water may be gradually increased; and when the young shoots have attained to about an inch in length, re-pot them, shaking off all the old soil, using for this purpose a mixture of good fibrous peat, light turfy loam, and sphagnum moss. Let the pots be well drained, and place them in the East India house, as these plants enjoy strong heat and an abundant supply of water, both at their roots and in the atmosphere.

PL. 327.



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PERISTERIA ELATA.

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PERISTERIA ELATA.

[PLATE 327.]

Native of Panama.

A terrestrial plant, with broadly ovate, bright green pseudobulbs, the size of a swan's egg, bearing on their summit several broadly lanceolate, plicate leaves, which are contracted into a petiole below; they are from three to five feet in height, and about six inches in breadth, bright green. *Scape* erect, attaining a height of from four to six feet, issuing from the side of the pseudobulb near its base, and bearing a long raceme of from ten to twenty or more showy, globose, fragrant flowers, each of which is furnished at the base of the pedicel with a large, ovate acuminate bract. *Sepals* broadly ovate, obtuse, concave, thick, and of a waxy consistency; *petals* similar, but smaller, all of a waxy whiteness, freckled with a few crimson dots on the outside; *lip* three-lobed, obovate, truncate, thick and fleshy, lateral lobes erect, white, dotted with crimson, middle lobe concave and inflexed. *Column* dilated, bearing two large fleshy wings.

PERISTERIA ELATA, *Hooker, Botanical Magazine,* t. 3116; *Revue Horticole,* 1876, t. 133; *Id.,* 1877, t. 110; *Floral Magazine,* N.S., t. 44; *Jennings' Orchids,* t. 44; *Williams, Orchid-Grower's Manual,* 6 ed., p. 512, with woodcut.

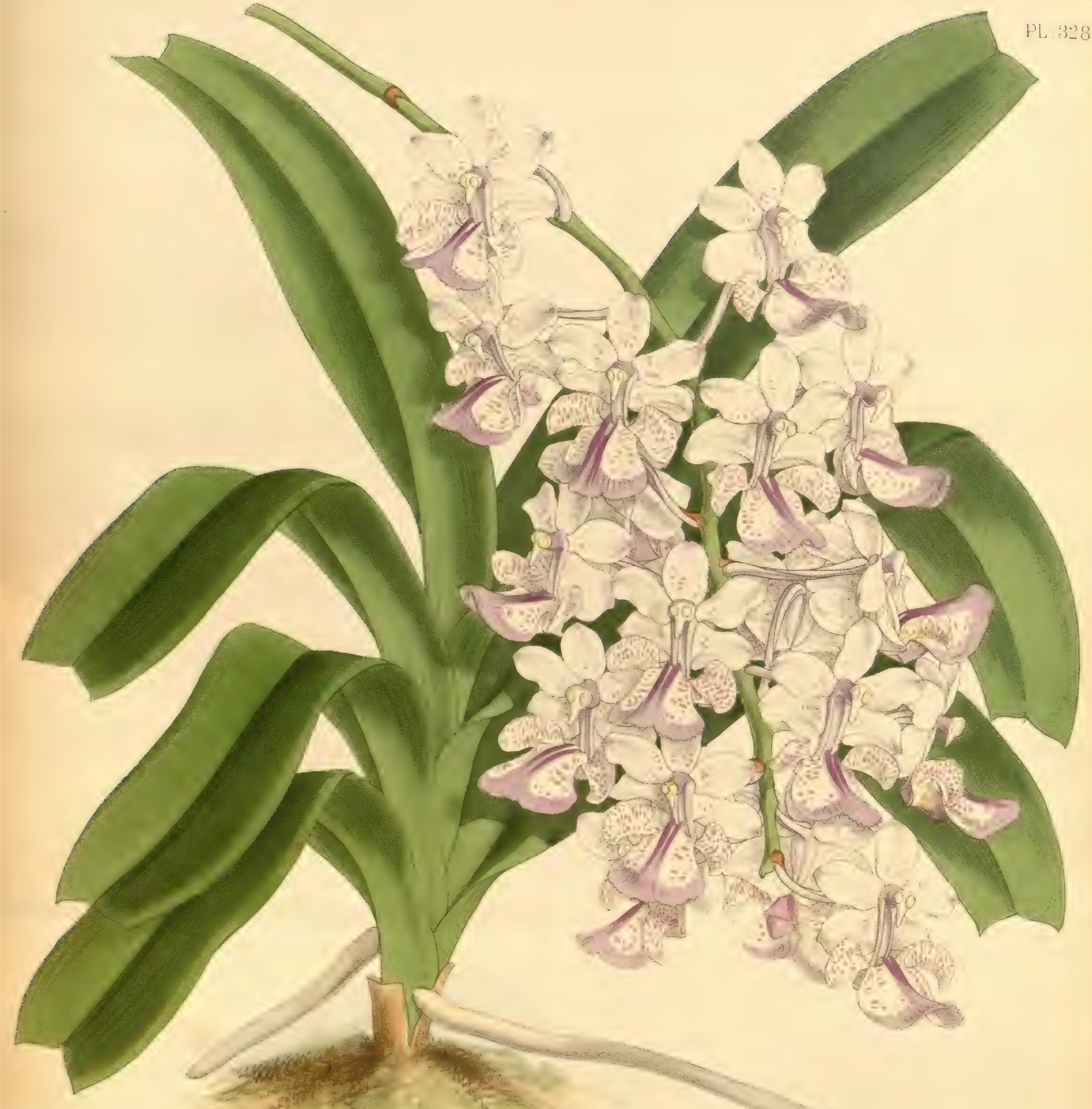
Peristeria is a genus which contains only a few species, but the one here figured is the noblest of them all. It is a most interesting plant, and is found growing wild in the neighbourhood of Panama, where it luxuriates and produces magnificent spikes of bloom in great abundance. The column of the flower presents a striking resemblance to a dove with expanded wings; hence it is known in its native country by the name of El Spirito Santo (the Holy Ghost or Dove Plant), and by the latter name it is familiarly known in cultivation. We were much interested with this plant when first it bloomed with us, now nearly forty years ago, at which time we staged it in a collection of Orchids, which was exhibited both at the Royal Horticultural Society's Gardens, Chiswick and at the Royal Botanic Society's Gardens, Regent's Park, in the months of June and July, which is an unusual time for it to flower, as it generally blooms in August and September. It is a very old inhabitant of our stoves, having been first introduced about the year 1832, and it is a very popular plant at the present time. It thrives best when associated with other stove plants.

The plant here represented was grown in a mixed collection of stove plants and Orchids in the establishment of Mrs. Kerr, Gallow Hill, Paisley, N.B. It was a very fine specimen, with nine spikes, each bearing twenty-five splendid flowers and buds. Mr. McIver, the gardener, says that he had treated it in the same manner as he had the other plants. The same day we had the pleasure of seeing this grand specimen another very fine example was staged in the Paisley Exhibition, and was a source of attraction to all the visitors, as indeed this species always is when in flower.

Peristeria elata is a noble evergreen plant, with stout pseudobulbs, bearing long and broad plicate leaves, which are contracted into a long petiole below, and are of a beautiful green colour. The flower spikes are produced from the side of the bulbs, and attain a height of from three to five feet, bearing from twenty to twenty-five of its waxy white blooms. The flowers open upwards from the base, and it continues blooming a long time.

This plant is easy to cultivate, but it requires a good season of growth, and after its bulbs are well matured in autumn thorough rest is necessary; this may be maintained until it begins to show its flower spikes, which occurs in the early spring months. During the period of active growth an ample supply of water to its roots is essential, in order to enable it to develop large bulbs; but after growth is completed it requires a very small quantity only—indeed, just sufficient to prevent it shrivelling being all that is necessary. As it requires strong heat when growing, and coming as it does from the low-lying hot districts about Panama, the temperature of the East India house is the best suited for it during the whole year. It also requires to be well exposed to sun and light, but the foliage must not be allowed to scorch, for such treatment is injurious to all plants, as it impedes their growth and renders them unsightly. The best compost for this plant is good rich turfy loam and leaf-mould, with a small quantity of thoroughly decomposed manure mixed with it. The drainage must be good, with some fibrous peat above it, which will keep it in good working order. The pot should be filled to within an inch of the rim, and the bulbs placed on the top of the soil, first spreading out their roots and just covering them with a little of the compost; carefully water it for some time, and the roots will soon penetrate the soil, as they are produced freely.

PL. 328



J. Nugent Fitch del. et lith.

AËRIDES EXPANSUM LEONIÆ

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AËRIDES EXPANSUM LEONIÆ.

[PLATE 328.]

Native of Burmah.

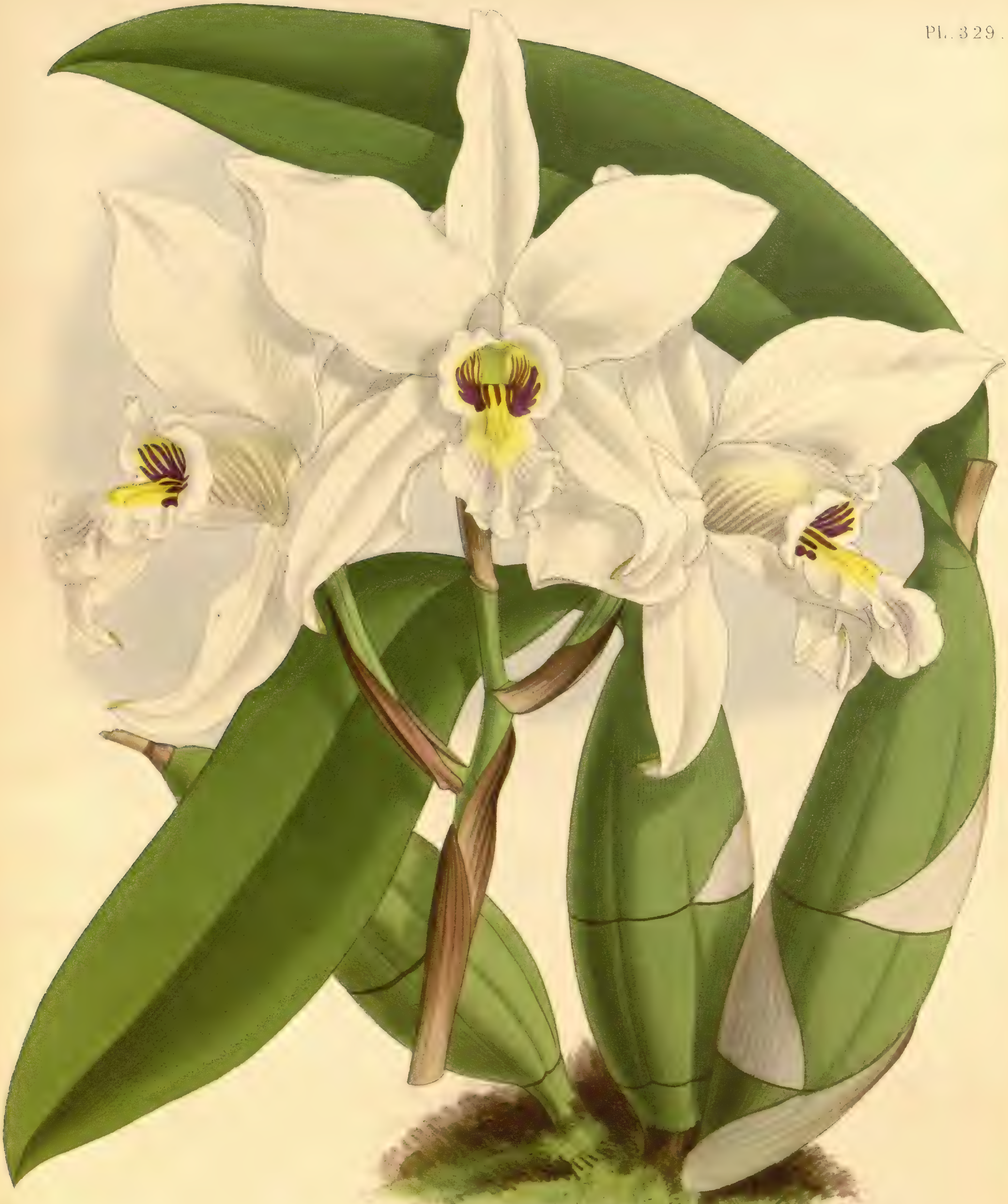
Epiphytal. *Stem* erect, stout, clothed with broad distichous leaves, and bearing near the base numerous stout aërial roots. *Leaves* distichous, broadly ligulate, channelled at the base, præmorse and mucronate at the apex, coriaceous in texture, and deep green. *Peduncle* axillary, bearing a dense, pendulous, many-flowered raceme, a foot or more in length. *Flowers* large and showy, the lip being much expanded; *sepals* and *petals* oblong obtuse, apiculate, the lateral sepals much the broadest, white suffused with delicate rose, tipped with rosy purple, and bearing on their surface a few scattered dots of the same colour; *lip* three-lobed, flat and spreading, lateral lobes obtusely falcate, middle lobe large, obovate, serrate on the edge, ground colour white, striped along the centre with rosy purple, where it joins a broad marginal band of the same colour, which extends all round the lobe.

AËRIDES EXPANSUM LEONIÆ, *Reichenbach fil.*, *Bulletino Societa Toscana di Orticultura*, Anno x., t. 14; *Williams, Orchid-Grower's Manual*, 6 ed., p. 101.

Aërides are remarkable for their elegant contour, their fine opposite leathery green foliage rendering them exceedingly attractive, even when not in bloom. When well grown they produce their racemes of fragrant flowers in great abundance, and disseminate a delicious odour, which perfumes the whole house in which they are grown, and always enchants those who delight in scented flowers. The variety we have now under consideration is a most beautiful one. It was flowered first by H. J. Ross, Esq., Castagnola, Lastra à Signa, Italy, and named by Professor Reichenbach, who considers it thoroughly distinct from *A. expansum*. We are extremely sorry that fashion has condemned these East Indian Orchids, and that Aërides are not more extensively grown, as they are free in habit, and easily cultivated; moreover, they do not require the amount of heat that is generally thought necessary to maintain them in vigour. We, ourselves, keep them during the winter months at a night temperature of about 60°. In spring and summer the sun will cause the houses to become hotter, and then these plants enjoy a considerable amount of moisture in the atmosphere.

For the subject of our drawing, we are indebted to the kindness of F. G. Tautz, Esq., Goldhawk Road, Shepherd's Bush, in whose admirably-grown collection it flowered in the month of July last year. *Aërides expansum Leoniæ* is a splendid variety, producing from the axils of the leaves its racemes of bloom in profusion, which attain the length of a foot or more. The sepals and petals are white flushed and faintly spotted with delicate rose, and tipped with rosy purple; lip white spotted with rosy purple, and having, in addition, a large deep rose-coloured central stripe on the anterior part, which extends for some distance along the lower margin. It blooms in July, and continues in perfection for three weeks if the flowers are kept in a warm house and free from damp, but if placed in a cool house they are apt to become spotted, which soon causes them to decay.

We have frequently given instructions as to the cultivation of Aërides, nevertheless, we here add a few more remarks upon their habits and requirements. In a state of nature these plants luxuriate upon trees, mostly near the margins of or in the vicinity of streams; in such situations they receive, through their aërial roots, which grow to a great length, whatever moisture arises from evaporation and from the heavy dews which envelope them; a portion of these roots hang free in the air, whilst others cling to the stems and branches of the trees, and in such positions they also enjoy the heavy rains that fall during their time of active growth, which is also their flowering season. Aërides grow nearly all the year round, but in a much less degree when the rainy season is over, as at this time they depend entirely upon the dew, and whatever moisture may arise from beneath to help to support them. They require a slight period of rest, but as they have no fleshy bulbs to maintain them during severe drought, nature has provided for them in a choice of situations, whilst the shade obtained from the forest trees materially assists in keeping them in vigorous health, although in very few instances are they found wild in such fine condition as they are to be seen in our Orchid houses. Under cultivation they thrive in a warm and moist house during the summer months. The temperature, however, must be reduced during winter, and the foliage kept dry. They are fine objects, grown in baskets and suspended from the roof, in which position the roots derive the full benefit of the moisture with which the atmosphere should be charged; they, however, will thrive equally well in pots, living sphagnum moss being the best material for them, with good drainage, as they require frequent waterings during summer, whilst in winter the moss should be kept in a nice moist condition. The leaves of Aërides should never be allowed to shrivel, as this causes the lower ones to turn yellow and fall away, leaving a naked unsightly stem; neither should they be subjected to the full sun during the hottest part of the day, but a shading of very thin material will be found sufficient to break the sun's rays from them.



J. Nugent Fitch del. et lith.

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LÆLIA ANCEPS STELLA.

LÆLIA ANCEPS STELLA.

[PLATE 329.]

Native of Mexico.

Epiphytal. *Pseudobulbs* oblong-ovate, compressed, angulately ribbed, clothed with a membraneous sheath, four to six inches high, usually bearing a single leaf; more rarely, however, two leaves are developed. *Leaves* oblong-lanceolate, acute, six to eight inches long, about two inches wide at the broadest part, channelled at the base, leathery in texture, and bright green. *Scape* terminal, erect, furnished with numerous sheathing keeled bracts at the joints, and bearing at the apex a raceme of from two to five flowers, which are about four and a half inches in diameter. *Sepals* lanceolate-acuminate; *petals* ovate-acute, much broader than the sepals, all spreading and pure white; *lip* three-lobed, the lateral lobes convolute over the column, the front edges reflexed, the anterior lobe oblong and undulated, pure white saving the yellow disc and the radiating purple streaks in the throat.

LÆLIA ANCEPS STELLA, *Reichenbach fil.*, *Gardeners' Chronicle*, N.S. XXV., p. 136.

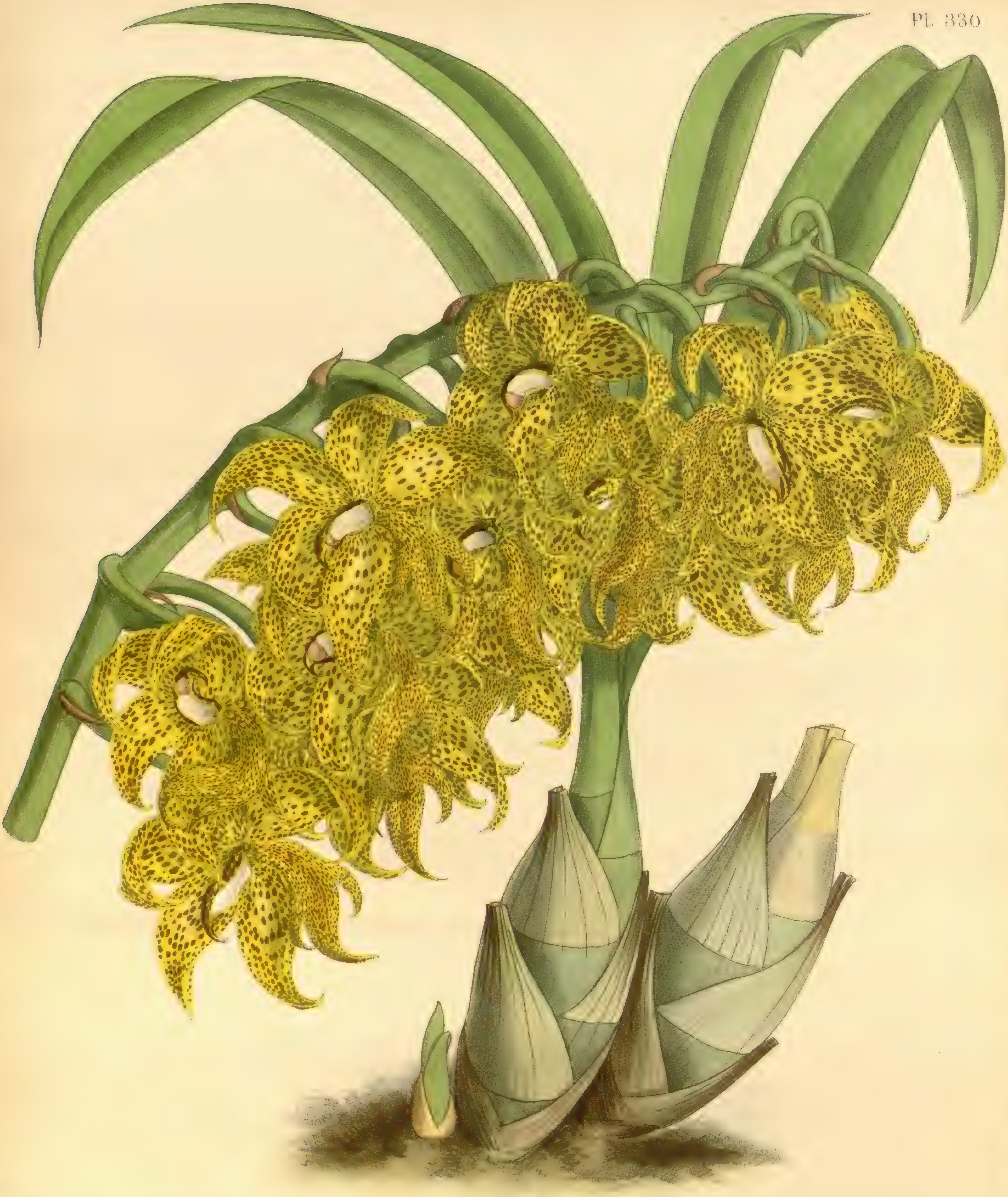
This splendid variety of Lælia, which we here bring to the notice of our subscribers, is one of the many forms of *Lælia anceps* which have been introduced in large quantities, within the last few years, by Messrs. Shuttleworth, Carder & Co., Messrs. Sander & Co., and various other firms, some of the varieties having been found in the old locality on the Atlantic side of the country, whilst others are said to be from a new district on the Pacific side; the enormous masses which have been imported prove that they grow in great luxuriance in their native habitats, and they probably had never before been disturbed by the hand of man. The introduction of these Lælias and so many other Orchids to this country in such large quantities has realised our expectations, and rendered the papers upon Orchids, which we contributed to the pages of the *Gardeners' Chronicle* nearly forty years ago, entitled "Orchids for the Million," veritably true, for they have become so reasonable in price, and the wants and requirements of so many of them are becoming so well understood, that they are really and truly the plants of the million; for the magnificent and exquisite colours, the curious and fantastic forms, the length of time the flowers remain in beauty, and the delicious fragrance yielded by them, induce nearly every one who has the convenience to commence the cultivation of Orchids.

The variety here figured was kindly sent to us by H. Gaskell, Esq., Woolton Wood, Woolton, Liverpool, in whose grand collection this plant flowered during the early part of the present year, under the care of Mr. Todd, who has charge of this Orchid collection.

Lœlia anceps Stella is a magnificent evergreen variety resembling the typical plant in growth, and producing its flowers in the same way, and at the same season of the year. The sepals and petals are white, lip also white, the throat yellow streaked with purple; these two colours contrast well with the white, and produce a very chaste effect. It blooms during the months of January and February, and continues in full beauty for two or three weeks, if the flowers are kept from damp. Water should not be allowed to fall upon these flowers, as the white soon becomes spotted, and thus the beauty is marred. This variety of Lælia requires the same treatment as *L. anceps Scottiana*, which we figured in our last number, plate 325; but we may add that these *Lœlias* are said to affect exposed situations where they get an abundance of sunshine, light, and air, being always found upon the branches of trees, on the borders of the forests, or upon rocks in equally exposed sites. The white varieties of this *Lœlia* have not hitherto proved such free-blooming plants as the species, which probably arises from the fact that we have not yet learned just the treatment that suits them; but Messrs. Backhouse and Sons, of York, appear to understand them better than most growers, as they flower more freely with them than at any other place with which we are acquainted. Their system of cultivation is to put them into an intermediate or Cattleya-house fully exposed to the sun, saving what shade is afforded them by the rafters of the house at different times of the day. They are kept very damp during the growing season, which accords with their natural conditions; for we are told that during the rainy season, which is their growing season, and lasts from May to October, they are drenched with rain for about five hours daily, that they remain wet through the night, and that the wind and sun dries them in the morning, so that the young growths are fully exposed to the sunshine during the day; but these have been dried by the wind before the sun attains its full power.

ORCHIDS IN THE UNITED STATES OF AMERICA.—MR. PITCHER'S ORCHIDS.—This collection has been established a little over two years only, and it already contains many plants of sterling merit. Mr. Pitcher is very fond of Cypripediums, and the collection contains nearly two hundred species and varieties; some of which are, in many instances, represented by a dozen examples. At the time of our visit, the following kinds were flowering:—*Argus, barbatum grandiflorum, barbatum nigrum, Warnerianum, calophyllum, callosum, ciliolare, concolor, Dayanum, Lawrenceanum, Sanderianum, selligerum, Spicerianum, almum, Boxallii, Dauthieri, Dominianum, euryandrum, Harrisianum, Haynaldianum, Hookerœ*, many varieties of *insigne, Lowii, nitens, tonsum*, and *villosum*, making a fine display. There was also a fine collection of cool Orchids, including fine plants of *Odontoglossum Pescatorei* and *O. Alexandrœ*, and Masdevallias of various sorts, also many Dendrobiums, Cattleyas, and Lælias. This gentleman suffered a great loss in February, when three of his beautiful houses were burnt down, destroying the celebrated Wilder's collection of Camellias, and injuring his fine collection of Nepenthes, &c., &c.

PL. 330



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B.S. Williams Publr.

MORMODES PARDINUM

MORMODES PARDINUM.

[PLATE 330.]

Native of Mexico.

Epiphytal. *Pseudobulbs* turbinate, or fusiform, from three to six inches high, and bearing on the apex several narrowly-lanceolate leaves, which are from a foot to eighteen inches long, gradually acuminate, membraneous, and strongly ribbed. *Peduncle* springing from the base of the pseudobulb, and bearing a nodding, many-flowered raceme, a foot or more long. *Sepals* and *petals* nearly equal, ovate-lanceolate acute, spreading at the base, their points conniving, ground colour yellow, over which is spread a profusion of rich brownish crimson spots; *lip* three-lobed, lateral lobes acute, middle lobe elongate acuminate, all of a rich yellow, freely spotted with brownish crimson.

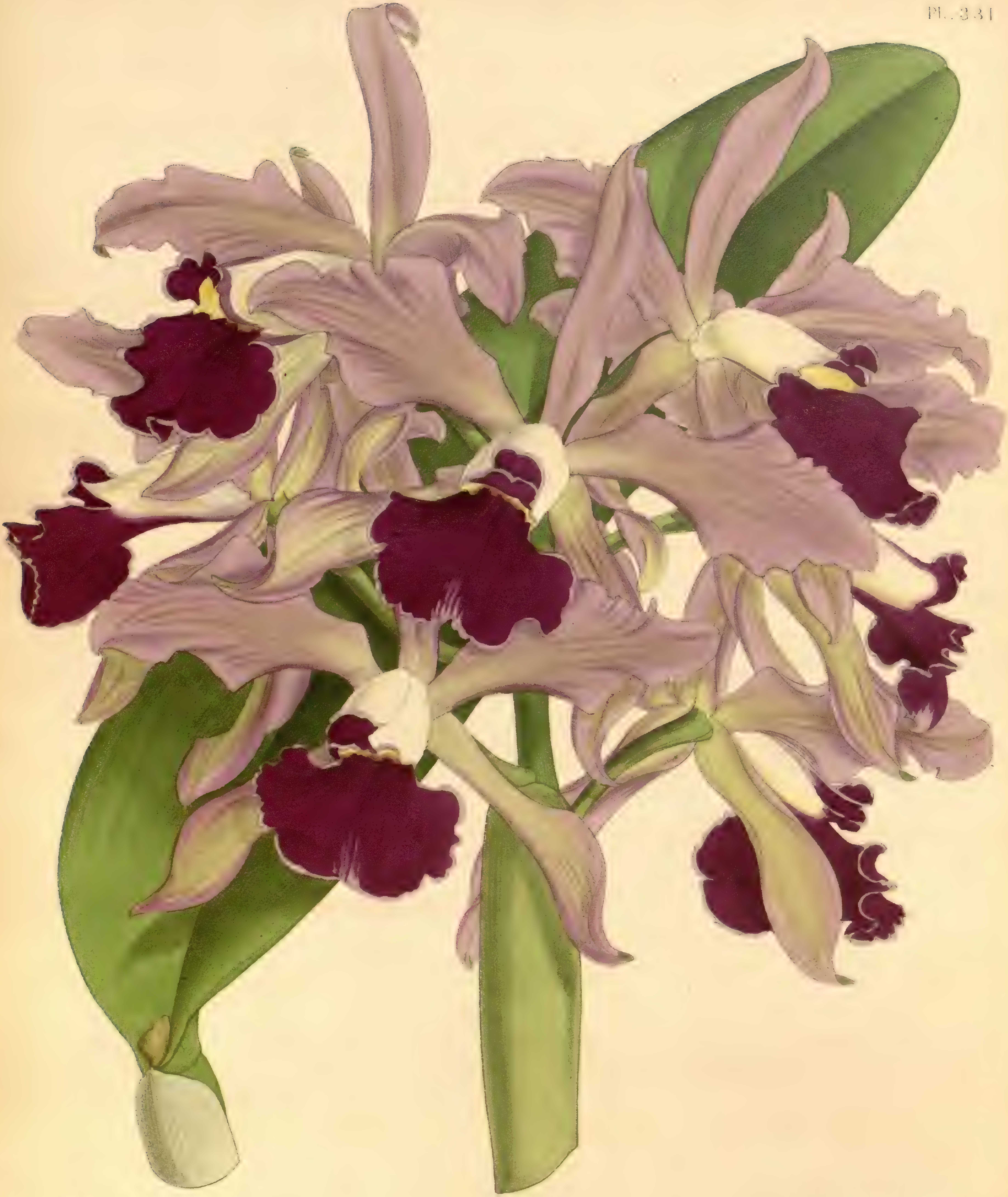
MORMODES PARDINUM, *Bateman,* in *Orchids of Mexico and Guatemala,* t. 14.; *Knowles and Wescott's Floral Cabinet,* t. 113; *Botanical Magazine,* t. 3,900; *Williams, Orchid-Grower's Manual,* 6 ed., p. 417.

CYCLOSIA MACULATA, *Klotzsch.*

This genus is nearly allied to Catasetum, a section of the Orchid family which is not so universally popular as it deserves to be. Mormodes contains a considerable number of species, very few of which, however, are known to cultivators; descriptions of some of the kinds more generally grown may be found in the sixth edition of the *Orchid-Grower's Manual,* page 416. The majority of the species are well deserving the attention of Orchid growers; but this beautiful plant, although introduced forty years ago, is very seldom to be seen, even in the choicest collections. It is of a peculiar habit of growth, forming thick and fleshy bulbs, which are deciduous. The flowers much resemble those of the genus Catasetum, but differ from them in being destitute of the cirrhi upon the column, in the lip being membraneous, and in the pollen masses being four, instead of two, also in various other minor details. These plants were more diligently searched for and cultivated a few years ago, when Orchids were neither so plentiful or so popular as they are at the present time. We have seen many specimens exhibited at the floral gatherings in London, and we hope again to see them become fashionable; for there is quite sufficient of the weird and beautiful in them to excite the curiosity of all lovers of nature, and to establish them in the ranks of favourite plants. Our drawing was taken from a finely grown plant in the select collection of Orchids cultivated by G. W. Law-Schofield, Esq., New-Hall-Hey, Rawtenstall, near Manchester. It was grown in the East India house, where it grew freely, and flowered profusely.

Mormodes pardinum is a beautiful deciduous species, and is a native of the warmer parts of Mexico. The bulbs are terete and tapering upwards, attaining to about six inches in height, and bearing on the upper part several lanceolate, membraneous leaves. The flower-spike is produced from the base of the bulb, and is a foot or more in length, with numerous flowers. Sepals and petals yellow, spotted with rich brownish crimson; lip three-lobed, bright yellow, also spotted with brownish crimson. The Mormodes are easily cultivated, but they require somewhat different treatment to the majority of Orchids. They are deciduous, losing their leaves after the bulbs are matured, and for months exist upon the moisture of the atmosphere only, which, in a state of nature, is derived from the dews at night; in the day-time they are subjected to the full exposure of the sunlight, whilst in the rainy season, which is the time they grow and flower, they receive heavy downpours of rain. Under cultivation we find them succeed best when growing in the heat of the East India house, and we endeavour to imitate their natural surroundings as nearly as possible; when growth is finished water is entirely withheld, and whilst they are at rest we keep them in the intermediate house, close to the glass, and fully exposed to the light. These deciduous plants we find are often neglected, during their resting season, by being put away out of sight, in consequence of which their bulbs do not ripen, neither do they flower, and are considered unsatisfactory; but give them attention when at rest as well as when growing, and they will well repay all the care bestowed upon them. These plants are about half grown when in flower, so that although they lose their leaves annually, there are always young leaves to accompany the blossoms. When they have begun to make new growth they should be re-potted if necessary. We find good fibrous peat, or even turfy loam, mixed together, suits them; drain the pots well, and elevate the plant above the rim in order to permit the water to pass rapidly away.

MR. SCHOLES' PHALÆNOPSIS AT BROOKLYN, NEW YORK, U. S. A.—We recently paid a visit to this gentleman's establishment, and were most agreeably surprised to find in his collection of Orchids some of the most magnificent Phalænopsis we have ever seen, for plants with fourteen leaves, measuring upwards of fifteen inches in length, are not frequently to be met with; here they are growing luxuriantly, one plant of P. Schilleriana having over one hundred and forty flowers open. There were many fine plants of this species, also of *P. grandiflora* and *P. amabilis* growing equally well. Mr. Scholes' mode of culture is to grow them in wire baskets suspended from the roof in the East India-house; the material used for them is live sphagnum moss, but during the growing season the plants are watered frequently with weak liquid cow-manure. The method of propagating these plants, as practised by Mr. Scholes, is worthy of attention, the old flower spikes being cut off and inserted in sand in the propagating-house, from which young plants are produced; when these are large enough to take off, they are put into pans and pots. We saw several plants, of various sizes, which have been obtained in this way. Mr. Scholes is certainly to be congratulated on his success in the cultivation of these plants.



LÆLIA ELEGANS MORRENIANA

LÆLIA ELEGANS MORRENIANA.

[PLATE 331.]

Native of Brazil.

Epiphytal. *Rhizome* stout. *Pseudobulbs* erect, terete, clustered, about a foot and a half high. *Leaves* in pairs, linear-oblong, obtuse, some eight inches in length, leathery in texture, and deep green. *Scape* terminal, erect, issuing from an oblong, compressed spathe, and bearing a raceme of seven or more flowers, which are very fragrant, each of which measure about six inches in diameter. *Sepals* oblong-lanceolate, the tips recurved, and of a uniform deep magenta-rose; *petals* much broader than the sepals, obovate, acute, much undulated, and of the same rich colour as the sepals; *lip* three-lobed, the side lobes rolled completely over the column, and reflexed at the edges, white on the outside, the reflexed tips being magenta-crimson; anterior lobe large, broad and flat, crenate, and undulated at the margin, broadly spathulate, and rich deep magenta-crimson in colour, veined with lines of a deeper hue, and margined with lilac.

LÆLIA ELEGANS MORRENIANA, *Reichenbach fil. M.S.*

Lælia elegans is generally supposed to be a natural hybrid, and consequently varies considerably both in the shape and colour of its flowers, but we have no hesitation in saying that the magnificent form here figured, and named by Professor Reichenbach *L. elegans Morreniana*, is one of the very finest that has ever come to our notice. The brilliant racemes of flower, and the exquisite colour of the blossoms will be readily acknowledged by a reference to our plate, which is a faithful representation by our artist, Mr. J. N. Fitch. The plant figured was imported and grown upon its native block, arriving in this country in the month of February, 1887, and it flowered in October of the same year. This season of the year we consider the best time to receive consignments of Orchids from abroad, especially those requiring intermediate temperature, as at this time the eyes are generally dormant and in good condition for starting, and the whole summer is before them, in which they can make good growth and ripen it well. The plant from which our illustration was taken flowered in the Victoria and Paradise Nurseries, and afterwards passed into the collection of R. H. Measures, Esq., The Woodlands, Streatham, who thus becomes possessed of the entire stock of this fine form. As before remarked, it is wonderful how this species varies both in form and colour; one seldom finds two plants with flowers exactly alike. The dark-flowered forms are the most rare, and the greater part of these bloom late in the season, that is to say, during the months of August, September, and October, which renders them more valuable, as Orchid flowers just at that season become somewhat scarce. The lighter-flowered section is usually earlier, flowering during spring and early summer.

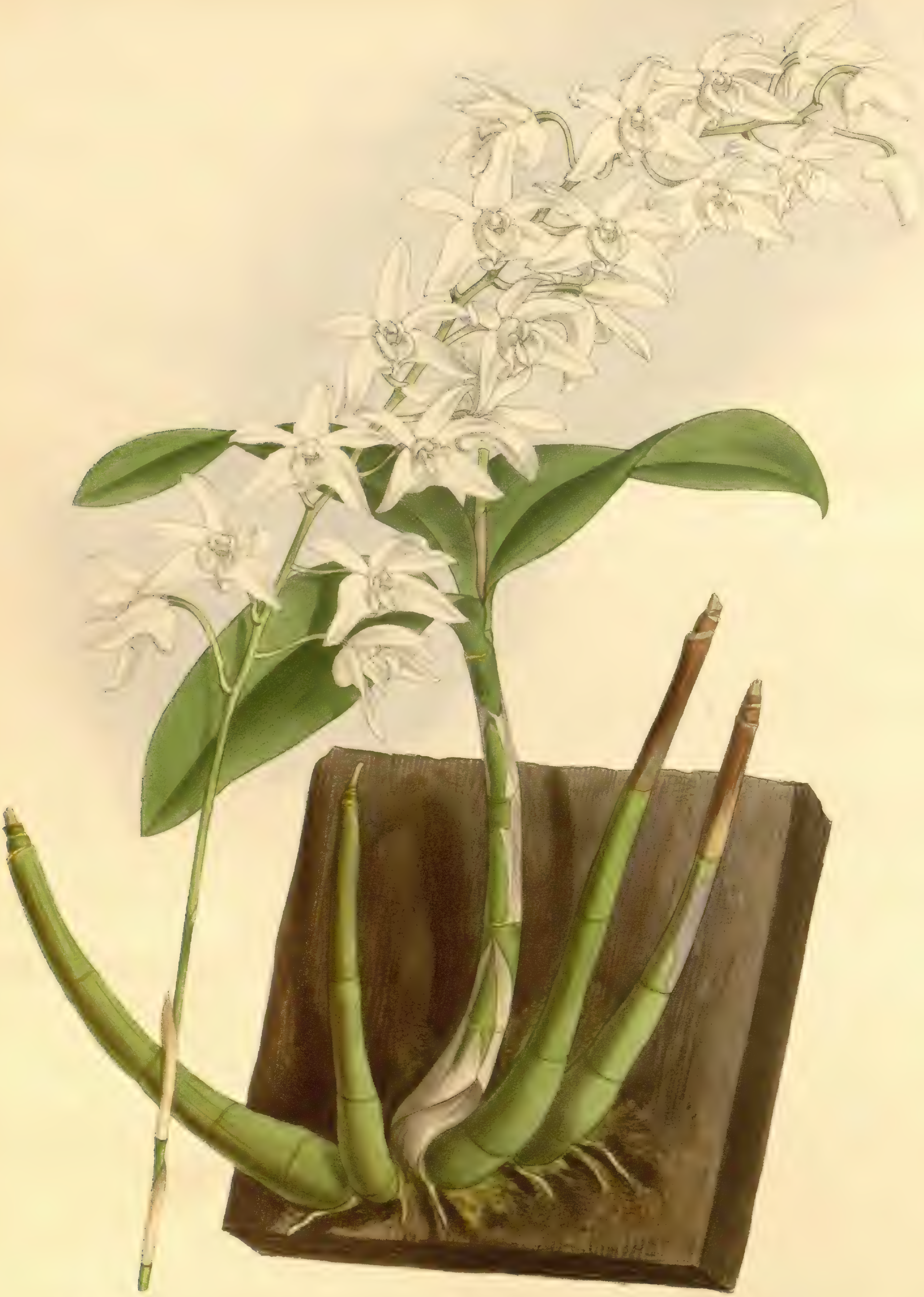
Lælia elegans Morreniana is a grand evergreen variety, with bulbs attaining to the height of about eighteen inches, and bearing upon the apex a pair of leathery dark green leaves, each of which is some eight inches long. The scape proceeds from between the leaves, and bears a raceme of seven or more flowers, the blossoms being of good substance and standing out boldly, and are deliciously fragrant; the sepals and petals are magenta-rose, whilst the front portion of the lip is rich magenta-crimson, margined with lilac. It flowers in October, and remains in bloom for about three weeks.

This variety, like all those of the *L. elegans* section, requires an abundance of heat, and should be grown at the warmest end of the Cattleya-house, well exposed to the light, but shaded from the hot sun; it also requires a good supply of moisture to the roots during the growing season, and therefore the drainage should be good, in order to prevent stagnation. After growth is completed, just sufficient water to keep it from shrivelling is all that is required, for if any of this section are allowed to shrivel, either in the bulbs or leaves, it takes them a long time to regain their vigour. *Lælia elegans* and its varieties are free-blooming plants, if grown with good exposure to light, in order to thoroughly mature their bulbs, and thus enable the plant to produce stout and vigorous shoots, the flowers usually appear before the growth is completed. Although these plants grow naturally upon the stems and branches of the forest trees, we find them thrive best under cultivation treated as pot or basket plants, and the soil in use for them should be a mixture of good peat fibre, a little sphagnum moss, and some medium-sized nodules of charcoal; and, in potting, the plants should be well elevated above the rim, as the roots often prefer to ramble outside the soil.

MR. AMES' ORCHIDS AT NORTH EASTON, MASS., U. S. A.—At this place is to be found one of the best collections of Orchids in the United States of America. Mr. Ames is a great lover of this family of plants, and his collection is in excellent condition, and contains very many novelties of sterling merit. A splendid new Cattleya-house has been erected during the last twelve months, and a grand collection of fine specimens adorn it, including hundreds of *C. Trianæ*, many dozens of which were in flower at the time of our visit; *C. intermedia*, bearing three dozen flowers; and a fine plant of a magnificent variety of *C. amethystoglossa*. Amongst the many Lælias in flower there were *L. elegans*, *L. Schilleriana*, *L. Wolstenholmiæ*, many fine *L. anceps*, *L. harpophylla*; and the innumerable sheaths that were showing promise well for a further grand display. *Zygocolax Veitchii* was in flower; this is a hybrid obtained between *Colax jugosus* and *Zygopetalum crinitum*, in which the characters of both parents are charmingly blended, which renders it very distinct. *Dendrochilum glumaceum* was represented by a pair of plants, each bearing over fifty spikes, rendering them very attractive.

(Continued under Plate 332).

PL. 332.



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DENDROBIUM KINGIANUM ALBUM.

DENDROBIUM KINGIANUM ALBUM.

[PLATE 332.]

Native of Australia.

Epiphytal. *Pseudobulbs* clustered, erect, somewhat oblong, tapering upwards into a long neck, and bearing upon their summit two or three leaves, which are oblong, leathery in texture, and deep green. *Scape* terminal, from between the leaves, erect, and furnished with numerous lanceolate acute sheathing bracts. *Raceme* nodding, about a foot long, and many-flowered. *Sepals* broader than the petals, the lateral ones sub-falcate and connate at the base, all pure white; *lip* three-lobed, lateral lobes erect, anterior lobe cordate, downy at the base, and bearing three raised lines on the disc, white, freckled, with a few reddish-brown lines and dots.

DENDROBIUM KINGIANUM, *Bidwill, Paxton's Magazine*, xii., p. 97; *Botanical Register*, xxxi., t. 61; *Lemaires' Jardin Fleuriste*, t. 143; *Hooker's Botanical Magazine*, t. 4,527.

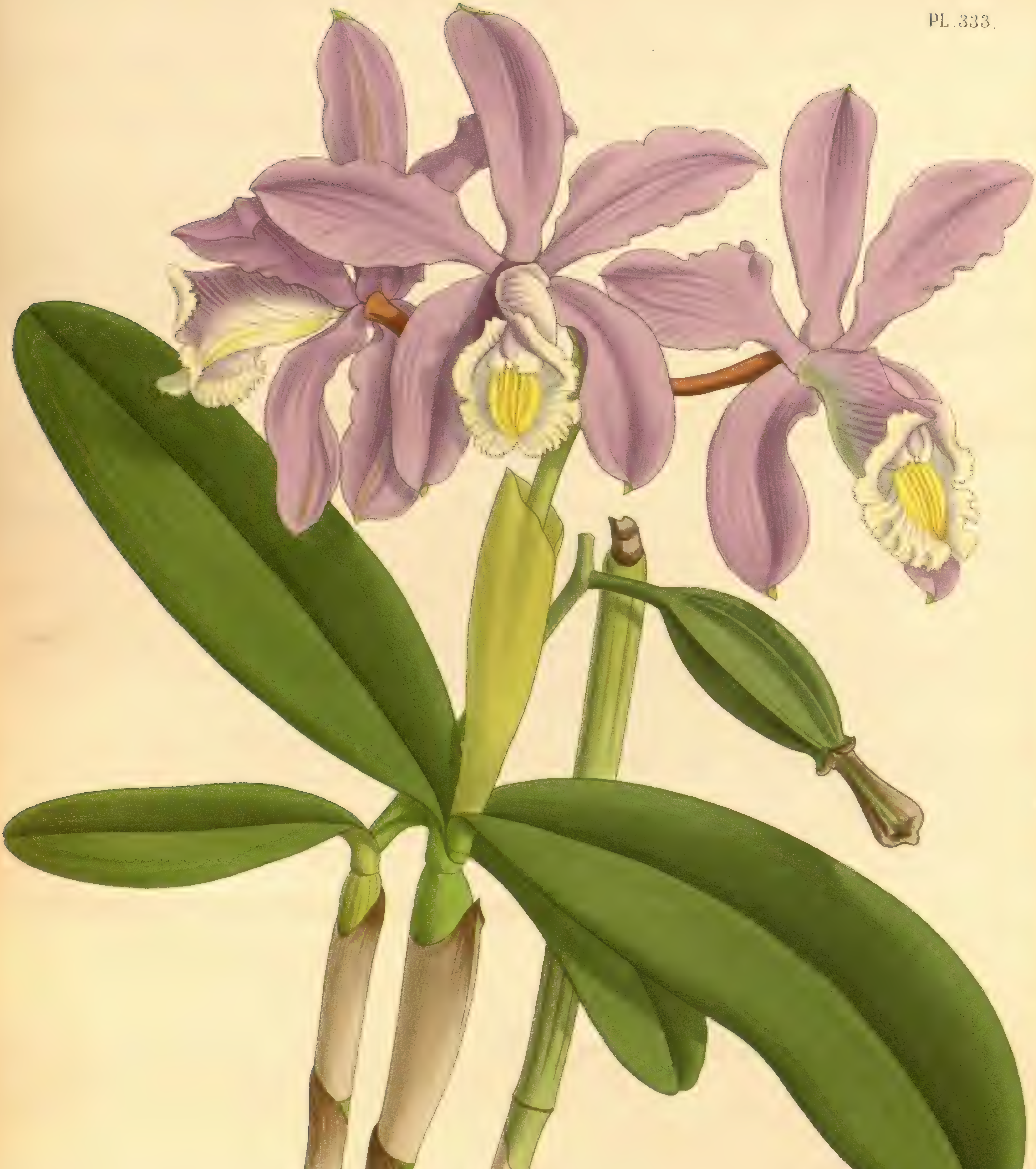
DENDROBIUM KINGIANUM ALBUM, supra.

Dendrobium Kingianum was named by Bidwill, in honour of Captain King, one of the early explorers of the Australian coast. It is an old inhabitant of our stoves, having been introduced to cultivation some forty-five years ago. The plant is distinct in growth from any other species of the genus which has come under our notice, and it produces violet-purple flowers on short racemes, but at the present time is seldom to be found outside of Botanic Gardens. The variety we here introduce to our readers, and to which we have given the varietal name of *album*, is both distinct and handsome, its white flowers, which are produced on long racemes, render it very beautiful and attractive, and afford a striking contrast with the violet-purple blooms of the species. It is astonishing to find so many white-flowered forms of Orchids being discovered now that white flowers are so much prized, and still more curious, that in most instances the coloured forms are the first to be introduced. For the opportunity of figuring this rare plant we are indebted to A. H. Smee, Esq., The Grange, Carshalton, in whose well-known collection it bloomed in the early part of the present year. There are many interesting Orchids to be found in Mr. Smee's garden, and various experiments in cultivation are tried from time to time, which sometimes end in good results.

Dendrobium Kingianum album is a compact-growing evergreen plant, with bulbs about six inches high, bearing light green foliage; the racemes of flowers proceed from the summit of the bulb, and are about a foot in length, the blossoms being pure white and very charming. It flowers during the months of February and March, and continues in beauty for a considerable time.

This variety requires the same treatment as the typical plant; that is to say, it should be grown in a pot or hanging basket, using fibrous peat and sphagnum moss for it to grow in, which should be well drained. A moderate supply of water should be given during the growing season, which commences immediately after the flowers have faded; when at rest, which is after the growth is completed, just sufficient moisture to keep the plant in a plump condition will be all that is necessary; but this plant, like many other Orchids, is greatly weakened and permanently injured if allowed to shrivel. This Dendrobium thrives well in the warm part of the Cattleya house; it requires an abundance of light, and a tolerable amount of sunshine, although care must be exercised to prevent its foliage becoming scorched. This plant does not submit kindly to division for propagating purposes, but when it is cut for this purpose, be careful to leave at least two or three old bulbs at the back of the new growths. The best time to divide it, we have found, is just as it is starting into growth. After dividing the plant the pieces should be potted into the material named above, and then placed in a somewhat shady part of the house until they begin to make new roots; when these are sufficiently advanced, remove them into the same position with the established plants.

Mr. Ames' Orchids at North Easton, Mass., U. S. A.—*(Continued from Plate 331.)*—A pair of *Cœlogyne cristata alba*, two feet across, were in grand condition. *Sobralia xantholeuca*, with upwards of a hundred growths, is a grand specimen. In the Odontoglossum houses thousands of fine healthy plants are grown. Those who once asserted that cool Orchids could not be grown well in the United States should see these plants, for they are in superb condition. Many dozens of the following Odontoglossums were in flower—*O. Alexandræ*, *O. Pescatorei*, *O. gloriosum*, *O pulchellum grandiflorum*, *O. triumphans*, *O. tripudians*, *O. luteo-purpureum*, *O. Sanderianum*, *O. Rossii* (many grand forms), *O. hystrix*, *O. aspersum*, *O. Edwardii* (a fine dark variety), *O. Cervantesii*, *O. Edithæ*, *O. Wilckeanum*, and these, with the Masdevallias that were in flower, made a fine show. Other houses contained Vandas, Aërides, Saccolabiums, &c.; and in another house there was a fine lot of Phalænopsis, bearing upwards of a hundred spikes of flowers. Of Cypripediums there is a very fine collection, and some gigantic specimens are amongst them. We noticed *C. Fairrieanum* and *C. vexillarium superbum* growing most freely. *C. Leeanum superbum* was in flower (twin flowers), and was a strong plant. Amongst others was the beautiful *Cœlogyne Massangeana*, represented by a pair of fine plants, with long graceful spikes, which were charming. A plant of the true *Cattleya Wageneri*, with twelve sheaths, was a fine specimen, *C. resplendens*, *C. Fausta*, *C. Zenobia*, *C. calummata*, *C. Mardelli*, *C. Brabantæ*, *C. porphyrophlebia*, and *C. Brymeriana*, *Lælia callistoglossa*, *L. Amesiana*, *L. bella*, *L. Philbrickiana*, are all represented by nice healthy plants. This collection has been brought together under the charge of Mr. Robinson, who is to be highly congratulated for the grand health they are in.



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CATTLEYA HARRISONIANA VIOLACEA

CATTLEYA HARRISONIÆ VIOLACEA.

[Plate 333.]

Native of Brazil.

Epiphytal. *Pseudobulbs* slender, erect, cylindrical, tapering below, when young clothed with large membraneous sheaths, becoming naked and wrinkled with age, from one to two feet in height, bearing upon the apex a pair of elliptic-oblong leaves, which are from four to six inches long, thick and fleshy in texture, and deep green. *Scape* erect, rising from between a large foliaceous sheath, bearing from three to five flowers. *Flowers* thick and fleshy in texture, and upwards of four inches across; *sepals* oblong, the lateral ones subfalcate; *petals* somewhat obovate, waved at the edge, and like the sepals of a uniform rich rosy purple; *lip* rolled over the column at the base, with the front edge reflexed from portion spreading, crisp and serrulate on the margin, of a beautiful rich rosy purple, the disc being yellow, and traversed with several raised yellow lines. *Column* broad, triquete.

Cattleya Harrisoniæ, *Bateman, Paxton's Magazine of Botany*, iv., p. 247; *Lindley, Botanical Register*, t. 1919; *Annales de Gand*, 1845, t 5.

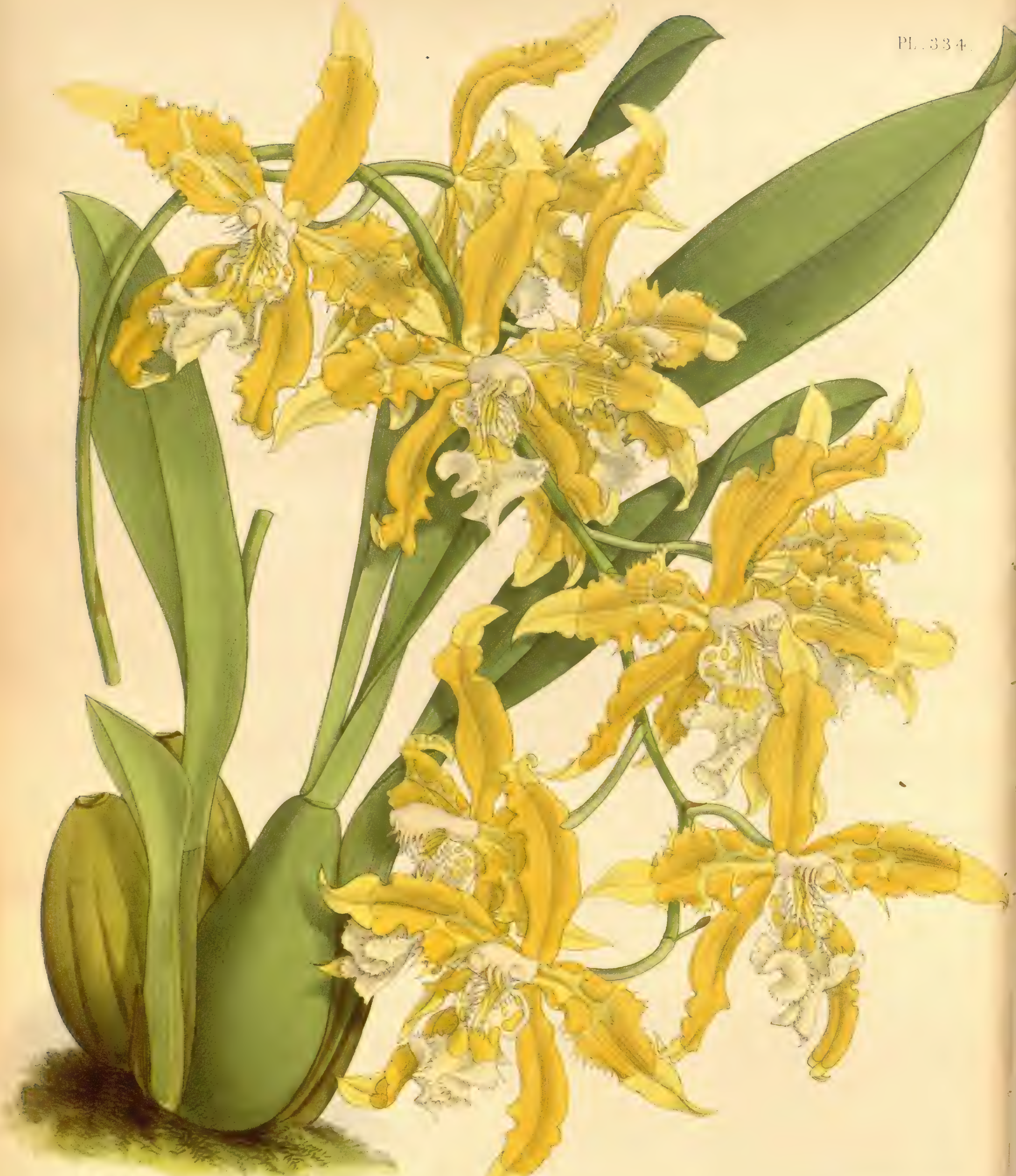
Cattleya Harrisoniæ violacea, *Hort.*; *Williams' Orchid Grower's Manual*, 6 ed., p. 135.

Epidendrum Harrisoniæ *Reichenbach fil, Xenia Orchidacea*, ii. p. 31.

Some years ago this plant was considered to be only a variety of *Cattleya Loddigesii*, a very old species known to cultivation as far back as 1819, and which was first figured in Loddiges' *Botanical Cabinet*, t. 337, as *Epidendrum violaceum*, before the genus *Cattleya* was founded by Lindley; *C. labiata* was the species upon which the genus was first founded, but *C. Loddigesii* was later on included with it. Lindley thus speaks of it in his *Collectanea Botanica*: "At the time we were first acquainted with this genus, the subject of the accompanying plate (*C. Loddigesii*) was the only species of which we had any information; it even then appeared to be essentially distinct from *Broughtonia*, both in habit and artificial characters. When at a subsequent period the rare Brazilian plant which has been published at Plate 33 of this work (*C. labiata*) was submitted to examination, it obviously offered such striking generic resemblances to the first, and at the same time so many beautiful specific differences that we no longer hesitated to establish upon the two a new genus, which was called *Cattleya*." It will thus be seen that although *C. labiata* was the first plant christened, *C. Loddigesii* was previously known to cultivation. In the whole of the books referred to above, *C. Loddigesii* is represented with spotted flowers; a few years later a very fine variety of *C. Loddigesii* turned up without spotted flowers, in the collection of Mrs. Harrison, which Mr. Bateman considered sufficiently distinct in the growth, colour and form of the flowers to make a new species of. He fully states his reasons in *Paxton's Magazine of Botany*, vol. iv. page 247, and calls it *C. Harrisoniæ.* Our present subject has been known in gardens for some years as *C. Harrisoniæ violacea,* being a much darker variety than the usual form. Our plate was prepared from a well-grown plant in the collection of F. G. Tautz, Esq., Studley House, Goldhawk Road, Shepherd's Bush.

Cattleya Harrisoniæ violacea is a charming evergreen variety, resembling the typical plant somewhat in its growth, but is sometimes taller; it also has the peculiar habit of making two growths in one season, and often flowers are produced upon both growths, thus its seasons of flowering may be said to be in April and May, and again about July, August, and September, lasting in full perfection for about four weeks. It is a very useful plant, both for home decoration and for public exhibition purposes. The sepals and petals are of a rosy purple; lip same colour, stained with yellow in the centre. This Cattleya thrives well when placed at the coolest end of the intermediate house, where it can obtain full exposure to the light, but it requires shading from the sun during the hottest part of the days in summer. The material we use for this plant is the same as that of the majority of Cattleyas, that is, a good fibrous peat and sphagnum moss. It may be grown in either a pot or basket, but must have perfect drainage; a moderate supply of water is necessary during active growth, and when that is completed, just enough moisture to keep the bulbs and foliage in vigorous condition is ample. When the plant shows signs of renewed growth, increase the water supply, to induce the formation of new roots, and thus the growths will become stronger.

MR. DE WITT SMITH'S ORCHIDS, LEE, MASS, U.S.A.—Here is a grand collection of Orchids, principally consisting of Cattleyas, Lælias, Dendrobiums, and Cypripediums. The Cattleya-house in March was a grand sight, with hundreds of *C. Trianæ,* of various forms, amongst them being some of the most beautiful and distinct we have ever noticed—one particularly so, with flowers eight inches across, sepals and petals deep clear rose, lip over two inches across, intense bright but deep purple, nankeen-yellow throat, beautifully and clearly marked, of fine form and great substance—a perfect gem. Many fine Dendrobiums were in flower in the same house, the most notable being *D. Devonianum,* with extra fine spike, *D. Wardianum, D. thyrsiflorum, D. densiflorum, D. chrysotoxum,* and *D. nobile;* these are but a few of the fine kinds that were displaying their elegant flowers. Of Cypripediums, Mr. Smith is collecting a great number. Many fine specimens of *C. insigne* and *C. villosum* were bearing over fifty flowers each; altogether about four dozen species and varieties were in flower, and the plants were doing remarkably well. There is also a good lot of Phalænopsis, and a small collection of Odontoglossums and Masdevallias. This collection, although not so extensive as some, is nevertheless full of interest, and one from which Mr. Smith obtains a great amount of pleasure and enjoyment.



J. Nugent Fitch del. et lith.

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ODONTOGLOSSUM VUYLSTEKEANUM.

ODONTOGLOSSUM VUYLSTEKEANUM.

[PLATE 334.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* stout oval, compressed, smooth when young, becoming furrowed with age. *Leaves* ensiform, acute, a foot to eighteen inches long, and bearing several accessory leaves from the base of the bulb. *Scape* lateral, terminating in a many-flowered raceme of flowers of great beauty. *Flowers* spreading, from three to four inches across; *sepals* lanceolate, slightly undulate; *petals* similar in shape to the sepals, but more undulated, coarsely toothed and fringed, all of a rich nankeen-yellow, the dorsal sepal being blotched with pale yellow; *lip* obovate, cuspidate, fimbriated on the edges, and much undulated, white, bearing a few spots of pale yellow, the crest deep yellow. *Column* ornamented with a pair of broad pectinate wings.

ODONTOGLOSSUM VUYLSTEKEANUM, *Reichenbach fil., Gardeners' Chronicle*, xxii., 1884, p. 7; *Williams, Orchid-Grower's Manual*, 6 ed., p. 469.

It affords us great pleasure to introduce this most rare and distinct Odontoglot to the readers of the *Album*. As will be seen by a reference to our Plate, it forms a grand contrast when associated with such kinds as *O. Alexandræ (crispum), O. Pescatorei*, and other light-flowered varieties. The greatest pleasure to those who have taste in arranging these most beautiful flowers, is to command the different forms and colours, and to so blend them together, that they produce a grand and harmonious display. Visitors to an Orchid house are often surprised at the arrangement of the gorgeous colours and beautiful forms of these flowers, and at the great want of taste too often visible, through the rough manner in which they are frequently set up. If this subject were more studied by growers of Orchids, we should find more admirers of these plants, as people of taste admire beauty of arrangement and variety of colour equally as quick as health and cleanliness, and there are no plants which can produce such gorgeous effects as Orchids, when associated with plants of elegant foliage, such as *Cocos Wedelliana, Geonoma gracilis*, and other Palms, the various species of Maiden-hair Ferns (Adiantum), and other choice small-fronded kinds.

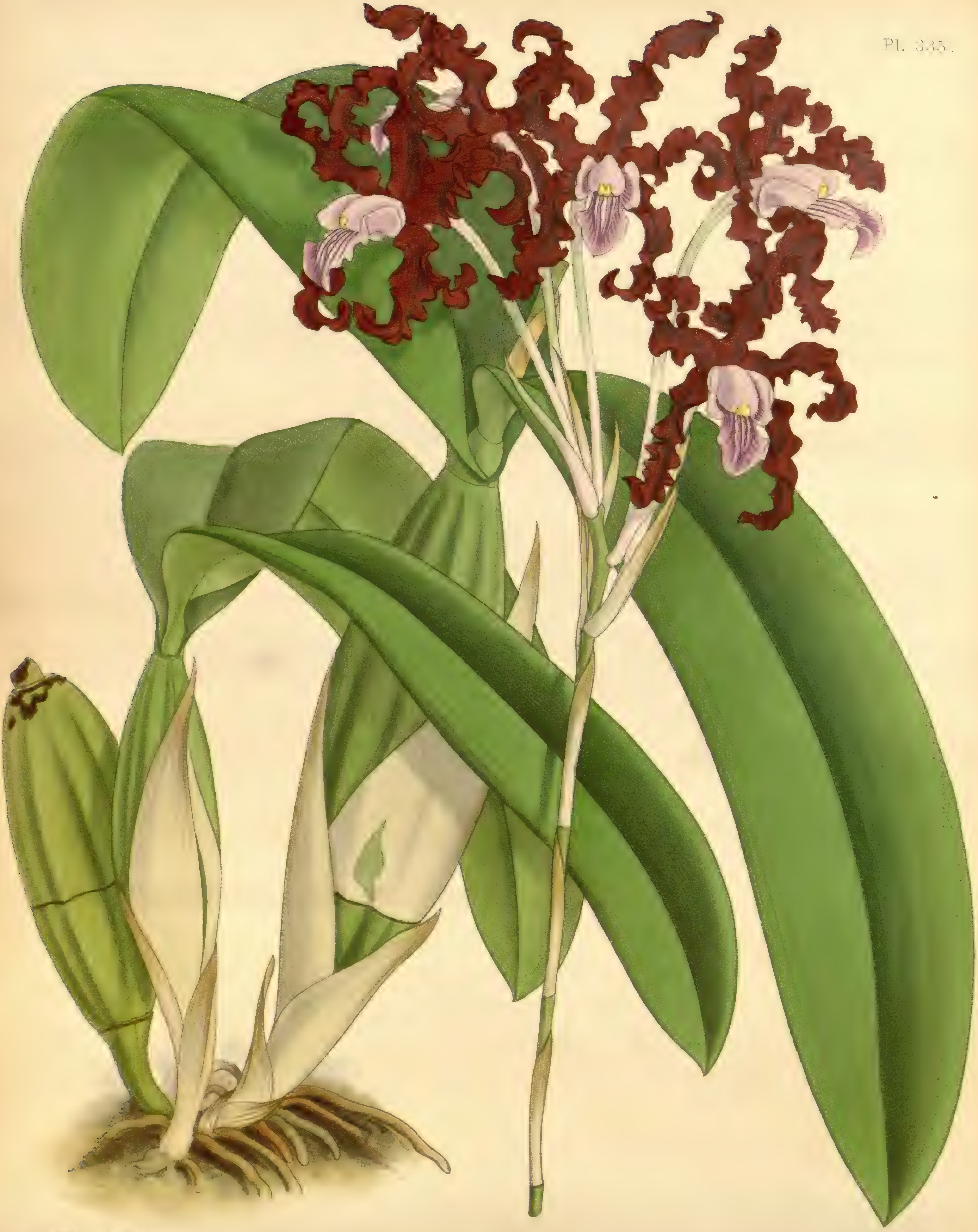
Odontoglossum Vuylstekeanum is a beautiful evergreen species, with bulbs about three inches high, and light green foliage. The spike attains to a length of about eighteen inches, bearing numerous flowers, which are individually about four inches across. The blossoms are sulphur-coloured, with a few blotches on the odd sepal; the lateral sepals and the lip are of a deep, rich, dazzling orange-colour. It blooms in the months of April and May, and continues in beauty for six weeks.

Our sketch was taken from a plant in the collection of R. H. Measures, Esq., The Woodlands, Streatham.

This Odontoglot requires the same treatment as *O. Alexandræ (crispum)*, the details of which we have so frequently given in the pages of the *Album* upon previous occasions.

Mr. W. S. Kimball's Orchids, Rochester, U.S.A.—This collection of Orchids now ranks amongst the finest in the United States of America, and when one remembers the time that Mr. Kimball has been engaged in the cultivation of this family of plants, it is really wonderful how such a fine collection could have been brought so rapidly together. A visit to his establishment is worth a long journey, for here exists the most extensive collection of Cypripediums in this country. Old sorts as well as new and rare kinds are represented, in many sizes; all those in commerce are to be found here, all extremely healthy, and upwards of sixty species and varieties were in flower at the time of our visit. A fine lot of Dendrobiums were also in flower, and the old *Cyrtopodium Andersonii*, bearing two fine spikes of bloom. Of Cattleyas and Lælias there are hundreds of plants, in various sizes. A gigantic specimen of *Cattleya intermedia*, bearing upwards of two dozen fine spikes, averaging five flowers on each; a fine form of *Cattleya Lawrenceana*, with six fine spikes; and the rare *Lælia Lindleyana* was also in flower. Phalænopsids thrive splendidly here, in fact, could not be better; many dozens were in flower. Of Odontoglossums and Masdevallias there are hundreds, of all the best and most popular species and varieties. Epidendrums are also well cared for. Many good Oncidiums were in flower. The old *Schomburgkia undulata* (see plate 335) was bearing six fine spikes, which produced a grand effect. There is likewise a fine Vanda-house, containing many excellent specimens, many of which were at the time of our visit in flower, yielding a rich and grateful aromatic perfume. Here also I saw over five hundred expanded flowers of *Lycaste Skinneri*, amongst them being many fine forms, partaking of all the peculiar shades of colour to be found in the species; this was a most magnificent sight, as the plants were flowering most profusely. In addition to these mentioned, there are hundreds of other fine plants; also a very extensive collection of the smaller-flowering Orchids, which are usually designated botanical curiosities, and which are for the most part despised by the majority of Orchid growers. Mr. Kimball, however, is a great enthusiast, and is fond of the small and modest flowers as well as the showy kinds; he is to be congratulated in being the possessor of one of the finest collections of Orchids in the United States of America; and to Mr. George Savage great credit is due for the healthy appearance of the collection and the thoroughly practical manner in which everything appertaining to them is carried out.

Pl. 335.



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SCHOMBURGKIA UNDULATA.

B S Williams F.L.S.

SCHOMBURGKIA UNDULATA.

[Plate 335.]

Native of Venezuela, Caracas, and New Grenada.

Epiphytal. *Pseudobulbs* stout, fusiform, from nine inches to a foot long, clothed with large membraneous sheaths when immature, becoming wrinkled with age. *Leaves* mostly in pairs; these are oblong, thick and coriaceous in texture, and from six to nine inches long. *Scape* terminal, from two to five feet in length, supporting a dense raceme of flowers, each of which is upwards of an inch and a half in diameter. *Sepals* and *petals* about equal, linear-oblong, much undulated and twisted, of a deep purplish red, shaded with brown; *lip* three-lobed, the side lobes oblong, erect, arching over the column, rosy purple, middle lobe cordate apiculate, purple, bearing on the disc five raised white ridges. *Column* broad, winged, purple.

Schomburgkia undulata, *Lindley, Botanical Register*, 1844, misc. 21; *Id. Botanical Register*, 1845, t. 53; *Linden's Pescatorea*, 1860, t. 32; *Warner's Select Orchidaceous Plants*, ii., t. 21.

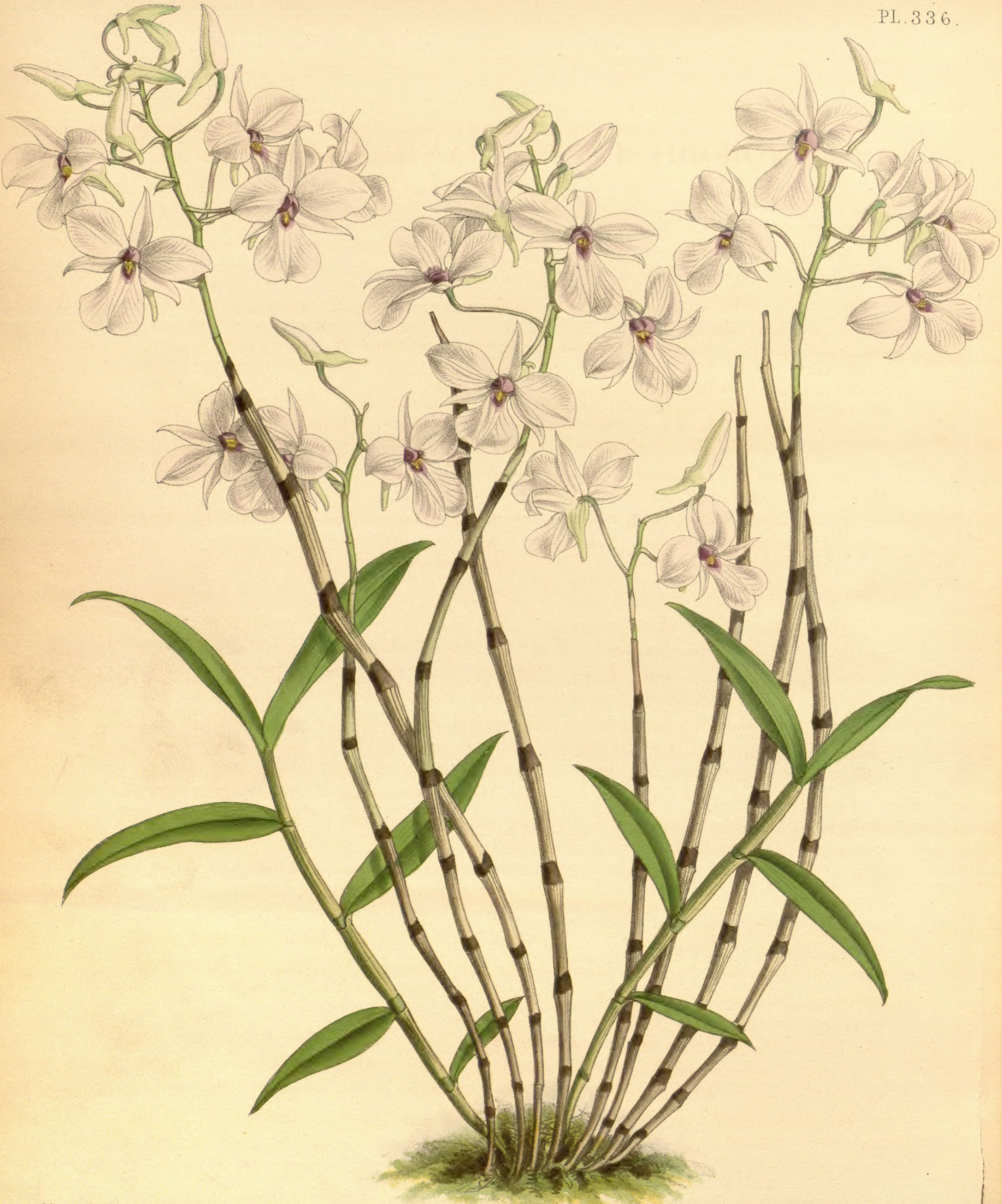
Bletia undulata, *Reichenbach fil., Xenia Orchidacea*, ii., p. 49.

Schomburgkia is a small genus of Orchids, of which, however, only a few are known as cultivated plants. The species here depicted flowered for the first time in this country in the then famous Ruckerian collection, at Wandsworth, in the year 1844. It was originally discovered by M. Linden, in the year 1841, growing on rocks in the neighbourhood of Truxillo, in Venezuela, where it is known by the name of Mulattita; on account of the undulations of the sepals and petals resembling the curly hair of the mulattos. It was also found by the same traveller, later on, near the natural bridge of Icononzo, in New Grenada, growing upon rocks at 2,400 feet elevation, its long flower spikes waving gently in the air. Wagener, another of the earlier collectors, also found this species near Caracas, so that it appears to have a wide distribution. This plant has at various times been sent to this country in large masses, but they realise such a small amount of money that it does not suffice to pay the trouble of collecting, independent of the charges for freight. It is, however, a species well deserving more extended cultivation, where space exists for its accommodation, and thrives well in baskets suspended from the roof, where it can obtain the maximum of light. The plant here figured was sent to us by P. Lloyd, Esq., Loughton, in whose collection it bloomed this year, under the care of Mr. Daniels, the gardener.

Schomburgkia undulata is an evergreen plant, with fusiform stems, a foot or more high, bearing lively green, leathery leaves, which are from six to eight inches in length. The spike is terminal, from two to five feet long, and bearing near the upper part a somewhat dense raceme of flowers. The sepals and petals are purplish brown, much undulated, and the lip of a rosy purple hue. It blooms in March, and the flowers continue in perfection for several weeks.

This plant succeeds best when grown in a hanging basket, and roots freely in the atmosphere; it also thrives well on rafts or blocks of wood, but under these conditions it requires more attention to keep it supplied with moisture. The growth commences after the flowers have faded, and during the formation of new bulbs it should be syringed twice a day in warm weather, in order to encourage it to grow vigorously, and thus to produce fine blossoms. This is usually considered a shy-flowering species, but if grown with full exposure to the light, there need be little fear but that it will bring forth its flowers annually. In a state of nature this plant is found growing upon trees and on rocks in exposed situations, where it is subjected to a decided dry and rainy season, the latter being its time of flowering and growing, at which period it requires great care and attention to keep it properly supplied with moisture, but after growth is completed just a moderate quantity only is requisite in order to keep the bulbs and leaves from shrivelling and becoming impoverished. We find the temperature of an intermediate house to suit it admirably, and that it does not appear to like much soil about its roots; this should be the same as we have previously recommended for Cattleyas.

Mr. Corning's Orchids at Albany, U.S.A.—This collection is one of the oldest now existing in the United States of America. The collection is very extensive, and contained very many novelties of sterling merit at the time of our visit in March. About a hundred *Cattleya Trianæ* were in bloom, and many very beautiful forms. Here is a fine collection of all the rare kinds of Cattleyas and Lælias, also a collection of East India Orchids; hundreds of Phalænopsids; and a very extensive collection of Cypripediums, amongst them being many extraordinary specimens over three feet across. Hundreds of Lycastes are grown here, and many were in flower, varying considerably in colour; there were also fine specimens of *Cymbidium Lowianum* in flower. I was pleased to meet with a fine strong plant of *Phajus tuberculosus* growing most luxuriantly and flowering freely. Of cool Orchids, here is also a grand lot—*Odontoglossum Alexandræ* and *O. Pescatorei* were in flower by the dozen; fine spikes of *O. triumphans* caught the eye; but what struck me most was a grand lot of *O. vexillarium*, with very strong growths and the picture of health, growing at the warm end of the Odontoglossum-house, with icicles a foot long hanging over their heads inside the house, and the plants appearing none the worse. Mr. Gray, Mr. Corning's gardener, who has had the charge of them for a great many years, said that they had been there all the winter, and that the icicles frequently hung from the roof as they did at the time of my visit, and that no injury had ever accrued. There is also a fine collection of Masdevallias here, and many species were in flower. A fine specimen of the rare *Nanodes Medusa* was beautifully flowered.



J. Nugent Fitch del. et lith.

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DENDROBIUM FYTCHIANUM ROSEUM.

DENDROBIUM FYTCHIANUM ROSEUM.

[PLATE 336.]

Native of Burmah.

Epiphytal. *Pseudobulbs* stem-like, slender, erect, a foot or more high. *Leaves* oblong-lanceolate, acute, three to four inches in length, deciduous, thin in texture, and light green. *Racemes* terminal, erect, bearing many flowers, which measure individually nearly two inches across; *sepals* lanceolate, pure rose colour; *petals* obovate, much broader than the sepals, and of the same lovely shade of colour; *lip* three-lobed, the lateral lobes small, erect, incurved over the column, purplish crimson; anterior lobe large, obcordate, apiculate, primrose colour, with a few hairs at the base, which are purple tipped with orange-yellow.

DENDROBIUM FYTCHIANUM, *Bateman, Gardeners' Chronicle,* 1864, p. 100; *Botanical Magazine,* t. 5444 (*D. barbatulum*).

DENDROBIUM FYTCHIANUM ROSEUM, *E. S. Berkeley, Gardeners' Chronicle,* third series, i., p. 209; *Williams' New Plant Catalogue,* 1887, p. 22.

Dendrobium is a very extensive genus, many species and varieties of which we have figured in previous volumes of the *Album.* There are many large-growing kinds which produce very showy blossoms, and there are also some very beautiful kinds amongst the smaller-flowered section, to which belongs the one whose portrait we have introduced. The typical *Dendrobium Fytchianum* is a very pretty plant, and one that has been confounded with an allied species (*D. barbatulum*), from which, however, it is very distinct. It was discovered by the Rev. C. Parish in the year 1863, growing on trees overhanging the river that flows through the Moulmein district of Burmah, and it is named in honour of General Fytch, who accompanied Mr. Parish on this journey. It was sent by Mr. Parish to the Messrs. Low & Co., of Clapton, who succeeded in establishing it, and through whom it was distributed throughout the Orchid-growing world.

The variety we here figure was found by Major-General Berkeley in 1886, some 200 miles distant from the habitat of the original species, growing on trees where rains and dews are abundant during the growing season. We had the pleasure of receiving the whole importation from this gentleman, which we introduced to commerce last year, and our drawing was taken from one of these plants, which flowered in the Victoria and Paradise Nurseries last year. Major-General Berkeley is a keen observer, and has discovered and introduced many new and rare Orchids to this country. We are informed by him that this variety is one of the earliest of the Dendrobiums to flower in the district in which it is grown, some plants of it being in flower at Christmas. The original variety, found in the neighbourhood of Rangoon, flowers two months later; the difference probably being caused by the rains in Rangoon lasting longer than in the more northern habitat. This plant, as also the original form, are invariably found growing on the extreme top twigs of the trees and bushes, where there is absolutely no protection from the sun. This is the more surprising, as the plant is only found in very hot districts where the sun is very powerful in the day-time. It may, however, be noted that the dews at night in these districts are very heavy, and as the plants are generally found on bushes about twelve feet high, they are under the full influence of these night dews.

Dendrobium Fytchianum roseum is a distinct and pretty deciduous variety. The stems are slender, cylindrical and erect, from a foot to fifteen inches high; the young growths appear about the same time that the flowers begin to show upon the leafless stems of the previous year, so that although the plant is deciduous, the flowers are accompanied by the green leaves of the new shoots. The flowers are produced both on terminal and lateral racemes, and are of a delicate rose colour, the throat being of a darker hue. It blooms during the months of February and March, and continues in beauty some considerable time

This variety, like the species, is best grown in the East India house, suspended from the roof in such a position that it may obtain the full influence of the light, but it will require a little shade at mid-day when the sun attains its greatest power. We find small pans or baskets admirably adapted for this and similar small and tender plants. It requires but a small amount of material about its roots, and this should consist of rough fibrous peat and living sphagnum moss, which should always be kept in a sweet condition by good drainage; stagnant material about it often causes sudden death, but more often leads to an unhealthy condition in which the plants gradually dwindle away. It requires a liberal supply of moisture during its growing season, and also slight syringing in the morning and again in the afternoon; this assists in keeping away red-spider, which frequently attacks these small tender-leaved plants.